



TWIN STATE ENVIRONMENTAL CORP.

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Phase (check one)	Type (check one)
<input checked="" type="checkbox"/> Site Investigation	<input type="checkbox"/> Work Scope
<input type="checkbox"/> Corrective Action Feasibility Investigation	<input checked="" type="checkbox"/> Technical Report
<input type="checkbox"/> Corrective Action Plan	<input type="checkbox"/> PCF Reimbursement Request
<input type="checkbox"/> Corrective Action Summary Report	<input type="checkbox"/> General Correspondence
<input type="checkbox"/> Operations & Monitoring Report	

SITE INVESTIGATION REPORT

August 28, 1996

Allen Lumber
St. Albans, Vermont 05478

SMS Site #95-1939
UST Facility #N/A
TSEC #96-012

Facility Owned By:
Allen Lumber Company
P.O. Box 470
Barre, Vermont 05641
Contact: Mr. Timothy Watkins
(802) 476-4176

Written By:

Jon P. Berntsen
Staff Geologist

Reviewed By:

John R. Diego
Vice President

August 28, 1996

Mr. Bob Haslam
State of Vermont
Sites Management Section
103 South Main Street / West Office
Waterbury, VT 05671-0404

**RE: Supplemental Site Investigation
Allen Lumber Company, St. Albans, Vermont
TSEC Project No. 96-012**

Dear Mr. Haslam:

Enclosed is the Supplemental Site Investigation Report that was conducted to further evaluate the subsurface contamination on-SITE that was discovered during an initial site investigation. The contamination is the result of a former underground kerosene tank located on-SITE.

Our investigation included the installation and sampling of six (6) Geoprobe™ small diameter wells, and the delineation of the groundwater contaminant plume. The groundwater sample results were returned with low levels petroleum-related contaminants (benzene and/or toluene) in three (3) on-SITE monitor wells, with all concentrations below their respective USEPA Maximum Contaminant Levels.

Based on the results of this investigation, it does not appear that the groundwater contaminant plume has migrated off-SITE. Additionally, the site appears to be suitable for natural attenuation. Therefore, it is recommended that the SITE be classified as "Sites Management Activity Completed."

Please feel free to contact us to discuss our findings or other matters of concern.

Sincerely,

TWIN STATE ENVIRONMENTAL CORPORATION



Jon P. Berntsen
Staff Geologist

encl.

cc: Mr. Timothy Watkins
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1.0 INTRODUCTION

This report has been prepared by Twin State Environmental Corporation (TSEC) under agreement with the SITE owner, Allen Lumber Company, to present the findings of our recent investigation at the above referenced SITE (see SITE Location Map, **Figure 1**). A Work Scope/Cost Estimate for this phase of work was reviewed and approved by the State of Vermont Sites Management Section (SMS) as indicated by a letter dated April 25, 1996.

It appears the source of petroleum-related contamination is kerosene that has impacted the former UST area near the center of the SITE.

Based on the contaminant distribution and local hydrogeological conditions, it appears that the leading edge of the contaminant plume has not migrated off-SITE. Concentrations of petroleum-affiliated compounds do not exceed USEPA Maximum Contaminant Levels (MCLs) in any groundwater samples collected.

2.0 SCOPE OF SERVICES

The following scope of services were performed by TSEC during this investigation:

- A subsurface investigation was performed that included the installation of six (6) Geoprobe™ monitoring wells. Groundwater samples were collected from the six (6) newly installed monitor wells and analyzed for volatile and semi-volatile organic compounds (VOCs and SVOCs) via EPA methods 8020 and 8270 respectively.
- Falling head permeability tests were conducted in two (2) newly installed monitoring wells to obtain data necessary for calculating the hydraulic conductivity of the aquifer beneath the SITE.
- Travel times were calculated for contaminants discovered in the groundwater beneath the SITE.
- The discrepancy between the on-SITE laboratory data and the off-SITE laboratory was addressed, and a summary of the discussion is presented in section 10.1.2, Correlation of Mobile Laboratory vs. Off-SITE Laboratory Results.
- An expanded and more complete sensitive receptor survey, including field observations was conducted.
- Preparation of a summary report of the above-mentioned work.

3.0 SITE LOCATION AND DESCRIPTION

SITE Owner: Gary Allen et al.
Address: 280 South Main Street, Route 7
St. Albans, Vermont 05478
Size: 0.81 acre
Zoning: Commercial
Utilities: Water - municipal connection
Sewer - municipal connection
Electricity - overhead connection with underground distribution
Structures: One (1) one-story tall retail store and two (2) storage warehouses

The SITE is located on the western side of South Main Street (Route 7) in St. Albans, Franklin County, Vermont (see SITE Location Map, **Figure 1**). The buildings on-SITE are currently vacant and are for sale. A small section of the lot in the front of the retail store is paved, and the rear of the SITE consists of a gravel parking and storage area (see SITE Plan, **Figure 2**). The site was previously known as R.L. Vallee Hardware and Lumber.

The SITE is on a commercially zoned lot situated in a mixed land use area. The site is bounded to the north and west by property owned by Daniel Gaboury; to the south by R.L. Vallee Inc., and to the east by South Main Street.

The topography of the SITE generally slopes down to the west towards the New England Central Railroad line. Rugg Brook, located approximately 4,000 feet west of the SITE, is the closest downgradient surface water body.

4.0 UST CLOSURES ON SITE

Two (2) underground storage tanks have been removed from the SITE, one (1) 750 gallon kerosene tank, and one (1) 500 gallon fuel oil tank. The kerosene tank was removed on October 23, 1995 by R.L. Vallee, the former property owners and the fuel oil tank was removed on April 26, 1996 by Great Northern Environmental Services.

Similar soils were encountered in both excavations, which generally consist of sand and gravel to a depth of 6.5 feet below ground surface (bgs), and dense silt to approximately 8.0 feet bgs. Groundwater was encountered between 5.0 and 6.0 feet bgs.

A product sheen was noted on groundwater during the kerosene tank excavation, and based on PID readings and visual observations, soils in the vicinity of the tank appeared to be contaminated. Upon removal, the tank was observed to be in poor condition with corrosion and pitting with a 1-inch diameter hole near the bottom of the tank.

Approximately 13 yards of contaminated soil was excavated and polyencapsulated on site. This soil was later transported and disposed of off SITE in accordance with the Vermont Agency of Natural Resources Guidelines for Handling Petroleum Contaminated Soil and Carbon Media.

Prior to the excavation of the fuel oil tank, a stick measurement indicated that there was no water in the tank, and 36-inches of product. No visual contamination or PID readings were encountered in the fuel oil tank excavation, and no sheen was present on the surface of the infiltrating groundwater. The tank was observed to be in good condition with no corrosion holes.

5.0 SUBSURFACE EXPLORATION AND RESULTS

A subsurface exploration program was developed to gather data to provide a better understanding of the contaminant distribution in groundwater beneath the SITE.

5.1 Monitoring Well Installation

Six (6) Geoprobe™ small diameter wells were installed by TSEC to monitor the full extent of groundwater contaminants present beneath the SITE. The locations selected were based on assumed groundwater flow direction and evidence of contamination discovered during the advancement of soil borings during January 1996. The wells were installed in the following locations and are depicted on the SITE Plan, **Figure 2**.

- Monitor Well MW-1 was installed crossgradient, to the south of the former kerosene UST cavity;
- MW-2 and MW-3 were installed in the apparent downgradient direction of the former kerosene UST;
- MW-4 was installed to the northwest, in a cross- to downgradient location from the tank cavity;
- MW-5 was installed to the north and in the apparent crossgradient location of the former kerosene tank cavity; and
- MW-6 was installed to the east in an upgradient location from the former kerosene UST.

Further details of the monitor wells are presented below and in **Appendix A: Boring Logs**.

5.1.1 Monitor Well Construction

The newly installed wells are constructed of 1-inch schedule 40 polyvinylchloride (PVC) riser with 0.010-inch machine slotted screen. Standard construction techniques were used that include placing a clean filter pack in the boring annulus around the screened interval; a bentonite seal; a locking expansion plug to seal the top of the PVC riser; and a curb box set in concrete that is flush grade. The depths of the wells ranged from 5.5 to 10.75 feet below ground surface (bgs).

5.2 SITE Geology

5.2.1 Soil Description

According to the U.S. Department of Agriculture Soil Conservation Service, soils in the vicinity of the SITE are part of the Missisquoi Series, consisting of deep, excessively drained soils on terraces and deltas. Typically these soils have a very dark brown loamy sand surface layer approximately 5 inches thick. The subsoil from 5 to 30 inches is yellowish-brown loam sand and gravely coarse sand. The substratum from 30 to 60 inches is olive brown and grayish brown coarse sand. Slopes typically range from 0 to 3 percent.

5.2.2 Soil Descriptions and Results

TSEC installed six (6) small diameter wells on April 26, 1996 using the Geoprobe™. Borings for the wells were advanced to depths ranging from 8 to 10 feet bgs. Subsurface materials consisted of medium to coarse sand and gravel with silt from 0 to 4 ft bgs, medium to coarse sand from 4 to 6.5 ft bgs., and a glacial till consisting of silt, gravel, clay, and sand below 6.5 ft.

5.3 SITE Survey

A Topcon AT-G6 auto level was used to perform a stadia survey to identify the locations of key SITE features such as building corners and newly installed monitoring well locations. The data collected was used to prepare the SITE Plan (**Figure 2**) and corresponding water table and contaminant maps. A temporary benchmark was established at the west end of the retaining wall located behind the store.

6.0 GROUNDWATER SAMPLING

Groundwater samples were collected by TSEC on May 2, 1996 and May 23, 1996 from the newly installed monitoring wells. The two sampling events were requested in a March 21, 1996 letter issued by the State of Vermont, Sites Management Section (SMS).

6.1 Water Table Elevation Data

Prior to sampling, the depth to groundwater was measured in each well using a water interface probe. Groundwater was encountered between 1.77 ft bgs. and 7.88 ft bgs. at MW-2 and MW-6 respectively during the May 2, 1996 sampling round.

During the May 23, 1996 sampling round, groundwater was encountered between 2.79 ft bgs and 8.42 ft bgs at MW-2 and MW-6 respectively.

6.2 Groundwater Sampling

Two groundwater sampling events were performed on-SITE by TSEC on May 2, 1996 and May 23, 1996. Samples collected from Monitor Wells MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6 were submitted to a certified laboratory for analysis by USEPA Methods 8020 and 8270 for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) respectively.

To allow for the collection of a representative groundwater sample, each well was purged of three (3) well volumes of water with a new disposable bailer. Purge water from the wells was discharged directly to the ground surface. Samples were collected using a bailer, and then placed into laboratory supplied bottles.

Quality assurance/Quality control (QA/QC) samples incorporated into these sampling rounds included the collection of a duplicate sample during the May 2, 1996 sampling event. The duplicate sample, collected from Monitor Well MW-3, was analyzed by USEPA Method 8020 for VOCs. No duplicate sample was collected on May 23, 1996.

All chemical analyses were performed by ChemServe Environmental Analysts (ChemServe) of Milford, New Hampshire. The results of the groundwater sampling rounds are discussed in the following sections.

7.0 RESULTS OF SAMPLING ACTIVITIES

7.1 May 2, 1996 Sampling Round

The following information was obtained from the sampling round conducted on May 2, 1996.

7.1.1 Water Table Elevation and Flow Direction

Groundwater levels on SITE were measured by TSEC Personnel prior to sampling. As is previously mentioned, the depth to groundwater beneath the SITE was between 1.77 ft bgs. and 7.88 ft bgs. at MW-2 and MW-6 respectively. A summary of the measurements for all monitor wells is presented in **Table 1**. The calculated groundwater flow direction, based on these measurements, is to the west-northwest across the SITE, and is presented in **Figure 2**.

7.1.2 Analytical Results

The results of groundwater samples are summarized in **Table 2**, and the complete analytical laboratory report from ChemServe is provided as **Appendix B**.

Results of groundwater samples collected at Monitor Wells MW-1, MW-2, MW-5, and MW-6 were returned with all volatile and semi-volatile compounds below the detectable limit of the laboratory equipment. The samples collected at Monitor Wells MW-3 and MW-4 contained only toluene at a concentrations of 17 parts per billion (ppb) and 8 ppb respectively. The duplicate sample, also collected from Monitor Well MW-3, contained toluene at a concentration of 16 ppb. The concentrations reported for toluene are well below the Maximum Contaminant Level (MCL) of 1,000 ppb promulgated by the USEPA.

7.1.3 QA/QC Results

The relative percent difference (RPD) was calculated for BTEX compounds to be 6%, well within accepted values for RPD. No other compounds were detected in any of the samples collected during this sampling round.

7.2 May 23, 1996 Sampling Round

The following information was obtained from the sampling round conducted on May 23, 1996.

7.2.1 Water Table Elevation and Flow Direction

Groundwater levels on SITE were measured by TSEC Personnel prior to sampling. As is previously mentioned, the depth to groundwater beneath the SITE was between 2.79 ft bgs and 8.42 ft bgs at MW-2 and MW-6 respectively. A summary of the measurements for all monitor wells is presented in **Table 3**. The calculated groundwater flow direction, based on these measurements, is to the northwest across the SITE and is presented in **Figure 3**.

7.2.2 Analytical Results

The results of groundwater samples are summarized in **Table 4**, and the complete analytical laboratory report from ChemServe is provided as **Appendix C**.

Results of groundwater samples collected at Monitor Wells MW-1, MW-2, MW-3, MW-4, and MW-5 were returned with all volatile and semi-volatile compounds below the detectable limit of the laboratory equipment. The sample collected at Monitor Well MW-6 contained only benzene at a concentration of 2 ppb. The concentration reported for benzene is below the Maximum Contaminant Level (MCL) of 5 ppb promulgated by the USEPA.

8.0 TRAVEL TIME CALCULATIONS

In the March 25, 1996 letter from the Vermont Agency of Natural Resources, Waste Management Division, it was requested that estimated for contaminant travel time be presented in the supplemental investigation.

8.1 Falling Head Permeability Test

A falling head permeability test was conducted by TSEC personnel on May 2, 1996, in an attempt to determine aquifer parameters necessary for calculating contaminant travel time. A method originally described by Bouwer and Rice (1976) was employed to calculate the hydraulic conductivity, K , of the shallow aquifer beneath the SITE.

Two monitoring wells, MW-1 and MW-3, were selected for the falling head test. A known volume of water was introduced into the well to raise the water level to the top of the casing, and depth to water measurements were taken until the water reached its static level. After the introduction of approximately $\frac{3}{4}$ of a gallon of water into Monitor Well MW-1, the water level was still three (3) feet below the top of the casing. Therefore, the data from this well needs to be cautiously interpreted.

8.2 Calculated Hydraulic Conductivity and Travel Time Estimates

From the data obtained during the falling head permeability tests, a value for hydraulic conductivity, K , was calculated. Calculated K values range from 1.97 feet per day (ft/d) to 2.35 ft/d. These calculated values are consistent with published values for the subsurface conditions encountered. Under the measured hydraulic gradient of 0.037, and an average K of 2.15 ft/d, an apparent groundwater flow velocity of 0.79 ft/d was calculated.

Contaminants will generally move at a slower rate than the groundwater, with the rate dependent on the content of organic carbon and the effective porosity of the soil. The contaminant transport velocity, V_{cc} , is equal to the groundwater flow velocity, V_{gw} , divided by a retardation factor, R . The retardation factor is a function of soil effective porosity and fraction of organic carbon in the soil.

An estimate for the travel time of benzene, naphthalene, and o-xylene was calculated based on field measured values, with assumptions made for soil bulk density, soil effective porosity, and the fraction of total organic carbon present in the soil. Velocity for benzene, V_b , was calculated to be 0.49 ft/d; for o-xylene, V_{ox} , was calculated to be 0.20 ft/d; and for naphthalene, V_n , was calculated to be 0.07 ft/d. Based on these values, and the low concentrations of the compounds found, the contaminants should attenuate naturally before they migrate off SITE. It should be noted that neither o-xylenes nor naphthalene were discovered during this investigation, and are only presented as examples.

These conservative estimates assume that groundwater is traveling in a straight path beneath the SITE. Additionally, the presence of a silt and clay layer at approximately 8 ft bgs., indicates that there is a limited potential for the vertical migration of contaminants. Graphs of the water level measurements and flow calculations are presented in **Appendix D**.

9.0 POTENTIAL RECEPTORS

In the initial site investigation conducted by TSEC in January 1996, a receptor survey was conducted. A letter received from the SMS, requested an expanded evaluation of potential receptors in the vicinity of the Allen Lumber SITE.

A review of the State of Vermont, Water Division files was conducted during the initial site investigation. This review indicated that there are five (5) private wells located within 0.5 miles of the SITE, and none of these wells appear to be located downgradient.

The expanded receptor evaluation conducted during this supplemental site investigation identified both surface and subsurface receptors in the vicinity of the SITE. Subsurface receptors include the soil and groundwater at downgradient sites, and surface receptors include surface waters.

The only surface receptor identified that has a potential to be impacted is Rugg Brook, which is greater than ½-mile from the SITE. It is unlikely that a subsurface release from the SITE will negatively impact the brook. Additionally, it appears that the release from the SITE will have no negative effect on the property immediately downgradient from the SITE.

10.0 ADDITIONAL ISSUES FROM INITIAL SITE INVESTIGATION

10.1.1 Explanation of Extract Emulsification from Sample SB-5,

During the initial site investigation, the sample extract for sample SB-5 emulsified. A letter in response to the initial site investigation, dated March 25, 1996, requested clarification of this issue. TSEC contacted NEI/GTEL Environmental Laboratories of Wichita, Kansas, for a possible explanation. An explanation for this event occurring is called the "matrix effect."

The "matrix effect" occurs when compounds present can not determine which solvent to dissolve into, and in the case of SB-5, the solvent was either methylene chloride or water. The compounds will be present in both media, causing a gelling effect and lack of separation of the two solvents. This does not necessarily indicate the presence of a PHC compound or other chemical, merely the presence of a compound that will not be dissolved preferentially by water or methylene chloride.

10.1.2 Explanation of Mobile Laboratory vs. off SITE Laboratory Results

The March 25, 1996 letter also requested a discussion of the correlation between the mobile lab results and the off SITE lab results of soil and groundwater analyses. In response to this request, TSEC obtained chromatograms of two (2) of the samples analyzed by ChemServe (SB-3 and SB-5). These chromatograms, as well as the scans from the mobile laboratory, are presented as **Appendix E.**

10.1.2.1 VTPH

The analytes requested from ChemServe were limited to BTEX and MTBE only, whereas the field analyses called for BTEX and volatile total petroleum hydrocarbons (VTPH). Both off-SITE and field laboratory scans indicate the presence of PHCs heavier than BTEX. This corresponds to the presence of VTPH as indicated by the mobile laboratory.

10.1.2.2 BTEX

BTEX values did differ between the analysis performed by the mobile laboratory and the analysis performed by ChemServe. There are several possible explanations for this difference.

First, the methodologies used differ, in that the mobile lab utilized USEPA Method 3810, and ChemServe utilized USEPA Method 8020. Second, the water samples were collected from undeveloped wells and contained an abundance of sediment. The sample run by the mobile lab may have had VOC contaminated sediment introduced, whereas the sample run by ChemServe had higher controls prohibiting the introduction of sediment into the analysis.

Although some of the samples contain VOCs, none of the concentrations of compounds found exceed the USEPA MCLs.

11.0 SUMMARY AND CONCLUSIONS

Based on the information and analytical data collected during this investigation, TSEC concludes the following:

- From conditions identified to date, the most likely source of contamination that exists on-SITE is related to the former kerosene UST. The former UST and the contaminated soils in the vicinity of the former UST have been removed from the SITE; and
- Based upon the concentrations of contaminants observed on SITE, and the observed groundwater flow direction, the contaminants do not appear to be migrating off-SITE.
- No surface water interceptors, or public or private drinking water supplies that have been identified downgradient of the SITE appear to be threatened.
- Based on visual observations and PID readings during removal of the fuel oil UST, it appears that the tank was of sound integrity, and did not release petroleum product.
- Calculated hydraulic conductivity values, groundwater flow velocities, and calculated contaminant transport rates indicate that the site is a suitable candidate for natural attenuation. The potential for off-SITE migration of contaminants in groundwater is minimal.

Allen Lumber
SMS Site #95-1939
August 28, 1996

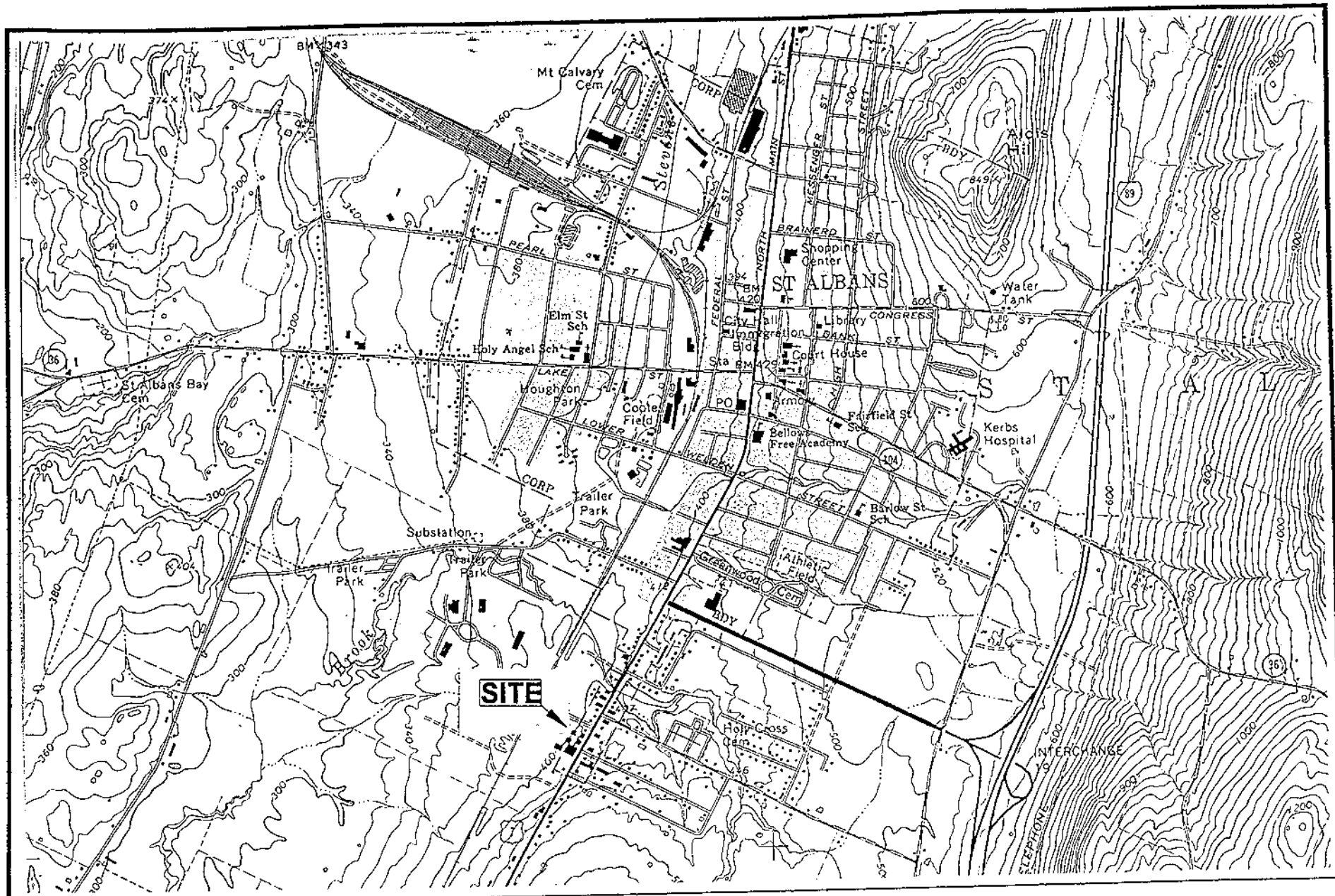
- The emulsification of the sample collected from boring SB-5 does not indicate the presence of a contaminant.
- The TSEC Mobile Laboratory results obtained during the initial site investigation are consistent with the results from ChemServe. The difference of values can be attributed to differences in methodologies, or due to introduction of sediment into the analyzed sample matrix.

12.0 RECOMMENDATIONS

Based upon current SITE conditions, TSEC offers the following professional recommendations:

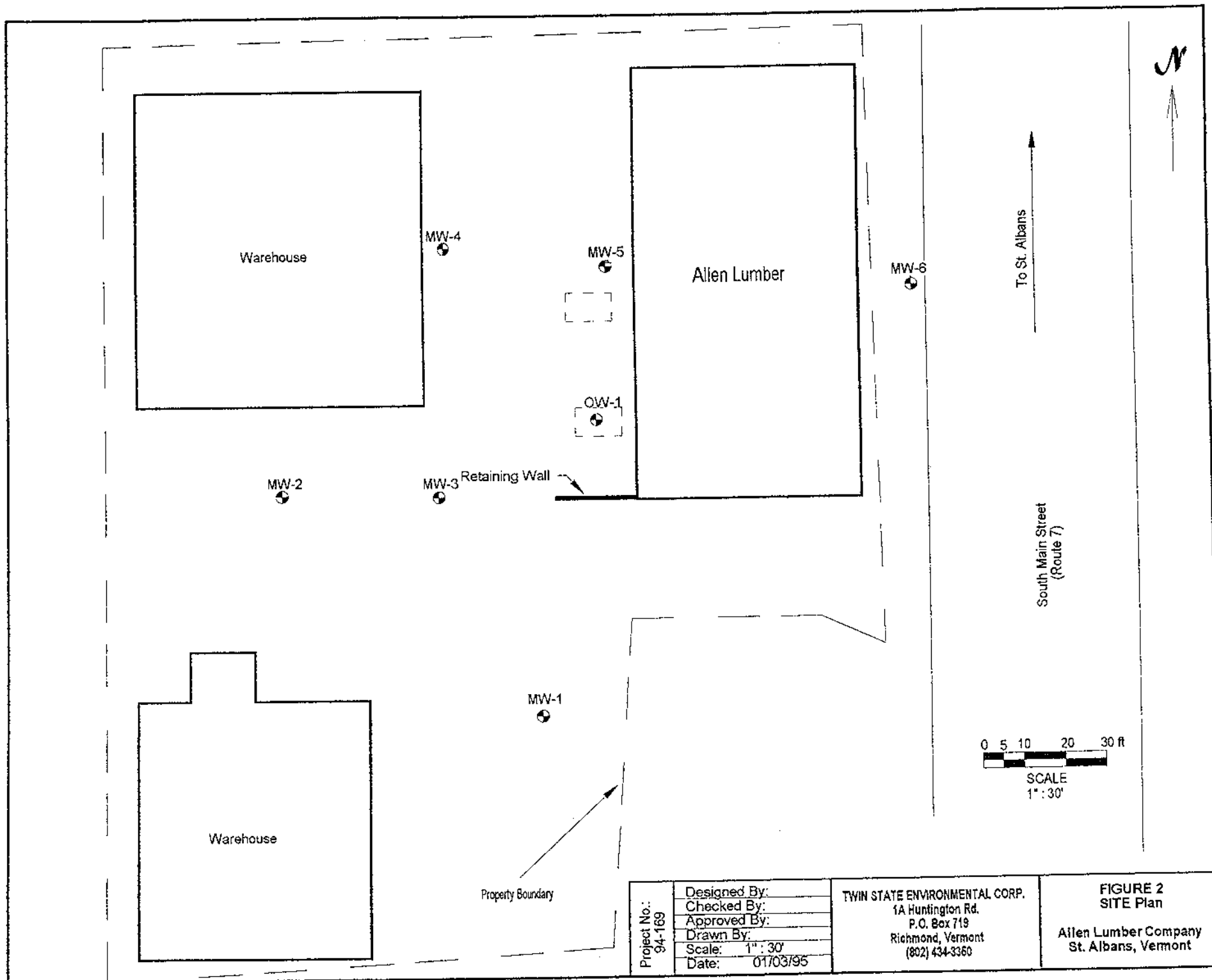
- The site is suitable for natural attenuation. Therefore, it is recommended that the contaminants be allowed to dilute and degrade through dispersion and volatilization.
- With analyzed contaminant concentrations from two rounds of groundwater sampling all below the USEPA Maximum Contaminant Levels, and the source removed from the SITE, it is recommended that the SITE be considered for "Sites Management Activity Complete" designation.

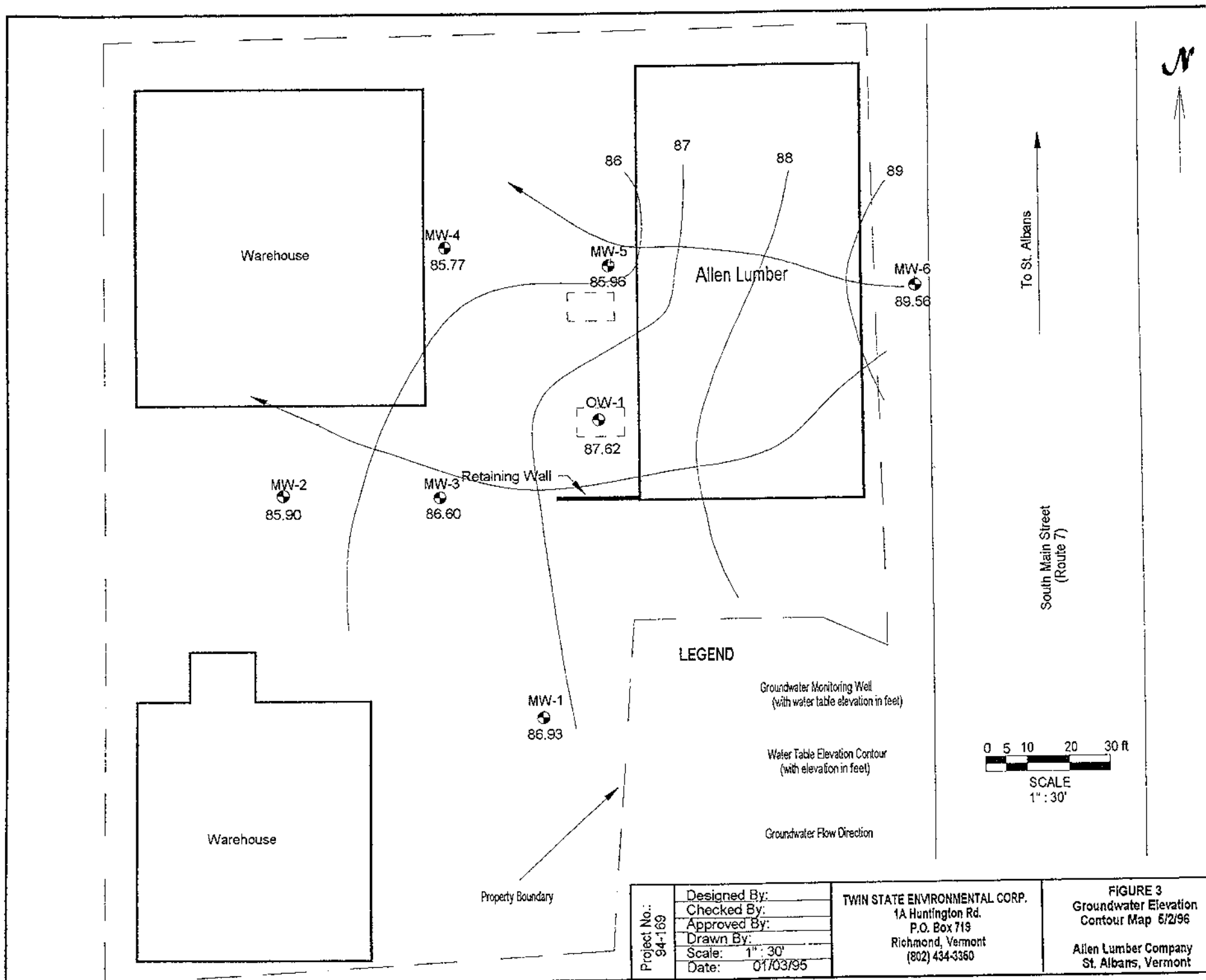
FIGURES

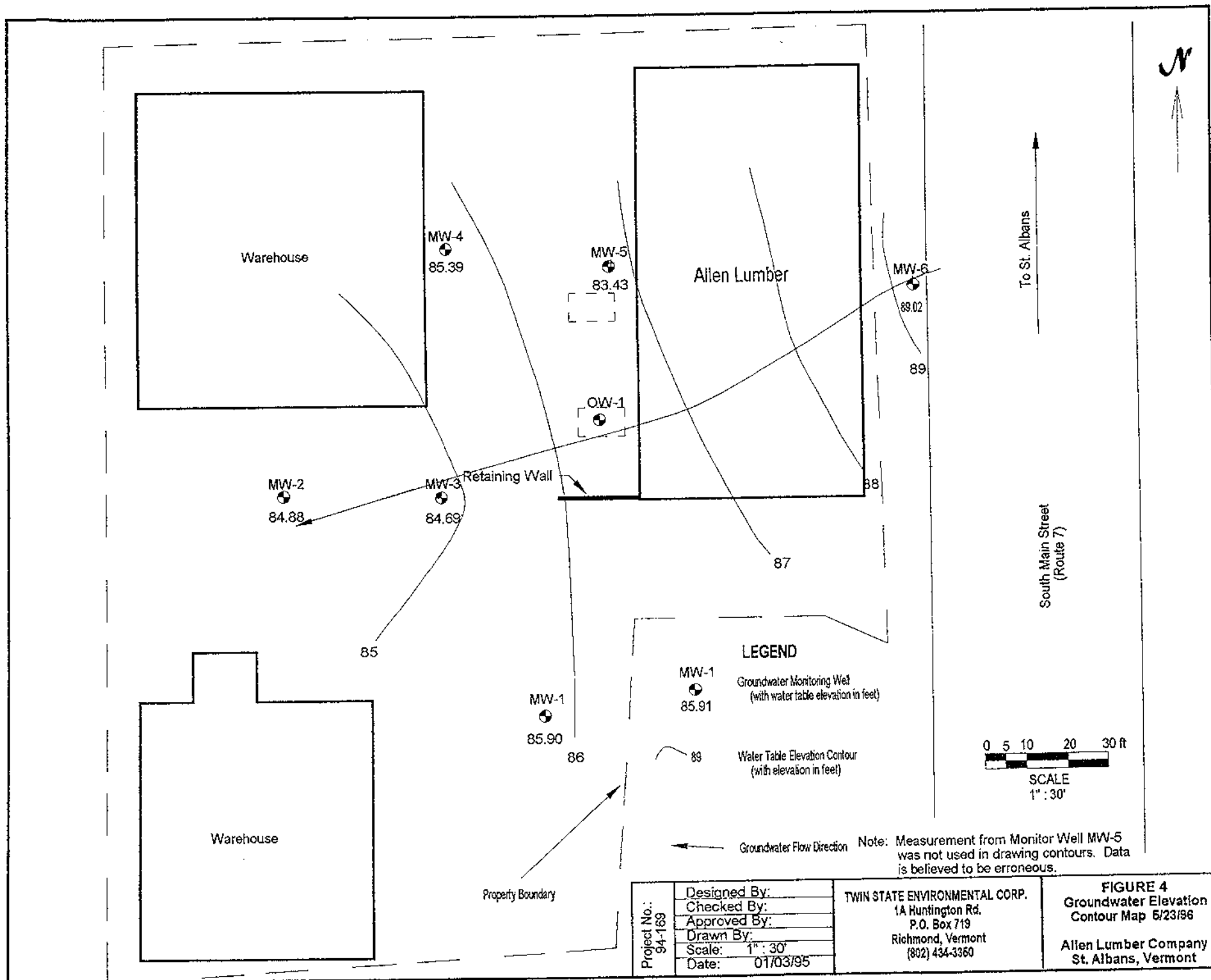


Source: USGS 7.5 Minute Series
St. Albans Quadrangle

Project No: 96048am	Designed By: kjb	TWIN STATE ENVIRONMENTAL CORP. 1A Huntington Rd. P.O. Box 719 Richmond, Vermont (802) 434-3350	FIGURE 1 SITE LOCATION MAP Allen Lumber Co. St. Albans, Vermont
	Checked By:		
	Approved By:		
	Drawn By:		
	Scale: as shown Date: 05/14/96		







TABLES

TABLE 1
SUMMARY OF GROUNDWATER ELEVATIONS

Allen Lumber
St. Albans, Vermont

May 2, 1996

Well Identification	Top of Riser Elev.	Depth to Product	Depth to Water	Depth of Well	Thickness of Water Table in Well	Water Table Elev.
MW-1	90.53	ND	3.60	7.52	3.92	86.93
MW-2	87.67	ND	1.77	5.75	3.98	85.90
MW-3	89.35	ND	2.75	8.00	5.25	86.60
MW-4	88.39	ND	2.62	8.17	5.55	85.77
MW-5	88.60	ND	2.64	7.83	5.19	85.96
MW-6	97.44	ND	7.88	11.00	3.12	89.56
OW-1	90.57	ND	2.95	6.33	3.38	87.62

Notes:

Elevation data are referenced to a TBM and are in units of feet.

ND - Not detected.

NM - Not measured.

Measurements recorded are referenced to a marking on top of PVC riser for each well.

Depth to fluid measurements were obtained using a Solinst Interface Probe.

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TABLE 2

SUMMARY OF GROUNDWATER QUALITY

Allen Lumber
St. Albans, Vermont

May 2, 1996

Test	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Total BTEX	MTBE
Sample ID	Concentration, ppb					
MW-1	ND	ND	ND	ND	ND	ND
MW-2	ND	ND	ND	ND	ND	ND
MW-3	ND	17	ND	ND	17	ND
MW-4	ND	ND	ND	ND	ND	ND
MW-5	ND	ND	ND	ND	ND	ND
MW-6	ND	ND	ND	ND	ND	ND
Duplicate	ND	16	ND	ND	16	ND
MCL	5	1,000	700	10,000	--	40 (1)

Notes:

ND - Not detected by laboratory instrumentation.

MCL - Maximum Contaminant Level promulgated by USEPA.

(1) - Vermont Health Advisory (VHA) standard for MTBE.

All samples were tested using EPA Method 8020.

Samples analyzed for SVOCs by USEPA Method 8270 were returned with concentrations below the detection limits of laboratory equipment.

Well OW-1 was not sampled as part of this project.

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TABLE 3

SUMMARY OF GROUNDWATER ELEVATIONS

Allen Lumber
St. Albans, Vermont

May 23, 1996

Well Identification	Top of Riser Elev.	Depth to Product	Depth to Water	Depth of Well	Thickness of Water Table in Well	Water Table Elev.
MW-1	90.53	ND	4.63	7.52	2.89	85.90
MW-2	87.67	ND	2.79	5.75	2.96	84.88
MW-3	89.35	ND	4.66	8.00	3.34	84.69
MW-4	88.39	ND	3.00	8.17	5.17	85.39
MW-5	88.60	ND	5.17	7.83	2.66	83.43
MW-6	97.44	ND	8.42	11.00	2.58	89.02
OW-1	90.57	ND	NM	6.33	NM	NM

Notes:

Elevation data are referenced to a TBM and are in units of feet.

ND - Not detected.

NM - Not measured.

Measurements recorded are referenced to a marking on top of PVC riser for each well.

Depth to fluid measurements were obtained using a Solinst Interface Probe.

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TABLE 4

SUMMARY OF GROUNDWATER QUALITY

Allen Lumber
St. Albans, Vermont

May 23, 1996

Test	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Total BTEX	MTBE
Sample ID	Concentration, ppb					
MW-1	ND	ND	ND	ND	ND	ND
MW-2	ND	ND	ND	ND	ND	ND
MW-3	ND	ND	ND	ND	ND	ND
MW-4	ND	ND	ND	ND	ND	ND
MW-5	ND	ND	ND	ND	ND	ND
MW-6	2	ND	ND	ND	2	ND
MCL	5	1,000	700	10,000	--	40 (1)

Notes:

ND - Not detected by laboratory instrumentation.

MCL - Maximum Contaminant Level promulgated by USEPA.

(1) - Vermont Health Advisory (VHA) standard for MTBE.

All samples were tested using EPA Method 8020.

Samples analyzed for SVOCs by USEPA Method 8270 were returned with concentrations below the detection limits of laboratory equipment.

Well OW-1 was not sampled as part of this project.

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APPENDIX A

TWIN STATE ENVIRONMENTAL CORP.
MONITORING WELL/SOIL BORING LOG

PAGE 1 OF 1

WELL BORING NO.: <i>MW-1</i>	DEPTH OF WELL: <i>8'</i>	DEPTH OF BORING: <i>9'</i>
PROJECT NAME: <i>Allen Lumber</i>	DEPTH TO WATER: <i>6'</i>	
PROJECT NO.: <i>96-012</i>	SCREEN DIA.: <i>1"</i>	DEPTH: <i>3-8'</i>
INSTALL DATE: <i>4/26/96</i>	SCREEN TYPE/SIZE: Sched. 40 PVC, 0.010 in. mach. slot	
TSEC REP.: <i>B. Wagner</i>	RISER TYPE: Sched 40 PVC	
RILLING CO.: <i>TSEC</i>	RISER DIA.: <i>1"</i>	DEPTH: <i>3-0'</i>
DRILLING METHOD: <i>Geoprobe</i>	GUARD TYPE: <i>Flush Mount Road Box</i>	
SAMPLING METHOD: <i>Geoprobe with macrocore</i>		RISER CAP:

DEPTH IN FEET	WELL PROFILE	SAMPLE DEPTH (FT)	PID (PPMV)	BLOWS/6" AND RECOVERY	SOIL DESCRIPTION AND NOTES	LEGEND	
1		0-4'	φ	24"	- well-sorted brown widely graded sand, gravel, silt - subrounded brown limestone clasts (≈1").	CEMENT GROUT	
2						NATIVE BACKFILL	
3						BENTONITE SEAL	
4						SAND PACK	
5			4-8'	φ	38"	- Gravel at 7' - well-sorted, widely graded gravel w/ sand, silt limestone clasts, clay w/ dolomite clasts.	WELL SCREEN
6							RISER PIPE
7							WATER LEVEL (APPROX)
8							
9							
10							
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25							

GRANULAR SOILS

BLOWS/FT	DENSITY
0-4	V. LOOSE
4-10	LOOSE
10-30	M. DENSE
30-50	DENSE
>50	V. DENSE

COHESIVE SOILS

BLOWS/FT	DENSITY
<2	V. SOFT
2-4	SOFT
4-8	M. STIFF
8-15	STIFF
15-30	V. STIFF
>30	HARD

PROPORTIONS USED

TRACE	0-10%
LITTLE	10-20%
SOME	20-35%
AND	35-50%

NOTES:

1. The density of soils were determined by field observations. Ref. to blow counts may not be accurate due to stones, cobbles or boulders that may be encountered.

TWIN STATE ENVIRONMENTAL CORP.
MONITORING WELL/SOIL BORING LOG

PAGE 1 OF 1

WELL/BORING NO.: <i>MW-2</i>	DEPTH OF WELL: <i>7.5'</i> DEPTH OF BORING: <i>9'</i>
PROJECT NAME: <i>Allen Lumber</i>	DEPTH TO WATER: <i>4'</i>
PROJECT NO.: <i>96-012</i>	SCREEN DIA.: <i>1'</i> DEPTH:
INSTALL DATE: <i>4/26/96</i>	SCREEN TYPE/SIZE: Sched. 40 PVC, 0.010 in. mach. slot
TSEC REP.: <i>B. Wagner</i>	RISER TYPE: Sched 40 PVC
DRILLING CO.: <i>TSEC</i>	RISER DIA.: <i>1"</i> DEPTH: <i>2.5'-0'</i>
DRILLING METHOD: <i>Geoprobe</i>	GUARD TYPE: <i>Flush Mount Road Box</i>
SAMPLING METHOD: <i>Geoprobe w/ macrocore</i>	RISER CAP:

DEPTH IN FEET	WELL PROFILE	SAMPLE DEPTH (FT)	PID (PPMV)	BLOWS* AND RECOVERY	SOIL DESCRIPTION AND NOTES	LEGEND
1		0-4'		28'	<ul style="list-style-type: none">- Well-graded, widely graded, gray gravel w/ sand & silt. (Bp 8")- Narrowly-graded brown sand, Trace gravel & silt.	<div> COBBLE GROUT</div> <div> NATIVE BACKFILL</div> <div> BENTONITE SEAL</div> <div> SAND PACK</div> <div> WELL SCREEN</div> <div> RISER PIPE</div> <div> WATER LEVEL (APPROX)</div>
2						
3						
4						
5		4-6'			<ul style="list-style-type: none">- Well-sorted, widely graded sand w/ gravel clasts (subrounded, >1.8").	
6						
7						
8		6-9'			<ul style="list-style-type: none">- Glacial till, silt, clay, gravel, sand - Bottom 6" clay	
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GRANULAR SOILS

BLOWS/FT	DENSITY
0-4	V. LOOSE
4-10	LOOSE
10-30	M. DENSE
30-50	DENSE
>50	V. DENSE

COHESIVE SOILS

BLOWS/FT	DENSITY
<2	V. SOFT
2-4	SOFT
4-8	M. STIFF
8-15	STIFF
15-30	V. STIFF
>30	HARD

PROPORTIONS USED

TRACE	0-10%
LITTLE	10-20%
SOME	20-35%
AND	35-50%

NOTES:

1. The density of soils were determined by field observations. Ref. to blow counts may not be accurate due to stones, cobbles or boulders that may be encountered.

TWIN STATE ENVIRONMENTAL CORP.
MONITORING WELL/SOIL BORING LOG

PAGE 1 OF 1

WELL/BORING NO.: MW-3	DEPTH OF WELL: 9.0'	DEPTH OF BORING: 9.5'
PROJECT NAME: Allen Lumber	DEPTH TO WATER: 2.75'	
PROJECT NO.: 96-012	SCREEN DIA.: 1"	DEPTH: 9.0-4.0
INSTALL DATE: 4/26/96	SCREEN TYPE/SIZE: Sched. 40 PVC, 0.010 in. mach. slot	
TEST REP.: B. Wagner	RISER TYPE: Sched 40 PVC	
DILLING CO.: TSEL	RISER DIA.: 1"	DEPTH: 4.0-0
DILLING METHOD: Geoprobe	GUARD TYPE: Flush Mount Road Box	
SAMPLING METHOD: Geoprobe w/ Macrocore	RISER CAP:	

DEPTH IN FEET	WELL PROFILE	SAMPLE DEPTH (FT)	PID (PPMV)	BLOWS* AND RECOVERY	SOIL DESCRIPTION AND NOTES	LEGEND
1					<p>- Well augered to 9' bgs. Materials similar to MW-1, MW-2</p>	<div style="display: flex; flex-direction: column; gap: 5px;"> <div> CEMENT GROUT</div> <div> NATIVE BACKFILL</div> <div> BENTONITE SEAL</div> <div> SAND PACK</div> <div> WELL SCREEN</div> <div> RISER PIPE</div> <div> WATER LEVEL (APPROX)</div> </div>
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GRANULAR SOILS

BLOWS/FT	DENSITY
0-4	V. LOOSE
4-10	LOOSE
10-30	M. DENSE
30-50	DENSE
>50	V. DENSE

COHESIVE SOILS

BLOWS/FT	DENSITY
<2	V. SOFT
2-4	SOFT
4-8	M. STIFF
8-15	STIFF
15-30	V. STIFF
>30	HARD

PROPORTIONS USED

TRACE	0-10%
LITTLE	10-20%
SOME	20-35%
MUCH	35-50%

NOTES:
 1. The density of soils were determined by field observations. Ref. to blow counts may not be accurate due to stones, cobbles or boulders that may be encountered.

TWIN STATE ENVIRONMENTAL CORP.
MONITORING WELL/SOIL BORING LOG

PAGE 1 OF 1

WELL/BORING NO.: <u>MW-4</u>	DEPTH OF WELL: <u>9.0'</u>	DEPTH OF BORING: <u>9.5'</u>
PROJECT NAME: <u>Allen Lumber</u>	DEPTH TO WATER: <u>2.6'</u>	
PROJECT NO.: <u>96-012</u>	SCREEN DIA.: <u>1"</u>	DEPTH: <u>9.0-4.0'</u>
INSTALL DATE: <u>4/26/96</u>	SCREEN TYPE/SIZE: Sched. 40 PVC, 0.010 in. mach. slot	
TSEC REP.: <u>B. Wagner</u>	RISER TYPE: Sched 40 PVC	
DRILLING CO.: <u>TSEC</u>	RISER DIA.: <u>1"</u>	DEPTH: <u>4.0-0'</u>
DRILLING METHOD: <u>Geoprobe</u>	GUARD TYPE: <u>Flush Mount Road Box</u>	
SAMPLING METHOD: <u>Geoprobe w/ Macrocore</u>	RISER CAP:	

DEPTH IN FEET	WELL PROFILE	SAMPLE DEPTH (FT)	PID (PPMV)	BLOWS* AND RECOVERY	SOIL DESCRIPTION AND NOTES	LEGEND
1					<p>- Averaged to 9.5 ft bgs. Materials similar to MW-1 & MW-2</p>	<div style="display: flex; flex-direction: column; gap: 5px;"> <div> CEMENT GROUT</div> <div> NATIVE BACKFILL</div> <div> BENTONITE SEAL</div> <div> SAND PACK</div> <div> WELL SCREEN</div> <div> RISER PIPE</div> <div> WATER LEVEL (APPROX)</div> </div>
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GRAVULAR SOILS

BLOWS/FT	DENSITY
0-4	V. LOOSE
4-10	LOOSE
10-30	M. DENSE
30-50	DENSE
>50	V. DENSE

COHESIVE SOILS

BLOWS/FT	DENSITY
<2	V. SOFT
2-4	SOFT
4-8	M. STIFF
8-15	STIFF
15-30	V. STIFF
>30	HARD

PROPORTIONS USED

TRACE	0-10%
LITTLE	10-20%
SOME	20-35%
AND	35-50%

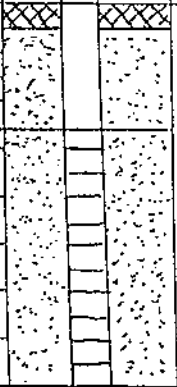







NOTES:

- The density of soils were determined by field observations. Ref. to blow counts may not be accurate due to stones, cobbles or boulders that may be encountered.

TWIN STATE ENVIRONMENTAL CORP.
MONITORING WELL/SOIL BORING LOG

PAGE 1 OF 1

WELL/BORING NO.: <u>MW-5</u>	DEPTH OF WELL: <u>8.0'</u>	DEPTH OF BORING: <u>8.5'</u>
PROJECT NAME: <u>Allen Lumber</u>	DEPTH TO WATER: <u>2.65</u>	
PROJECT NO.: <u>96-012</u>	SCREEN DIA.: <u>1"</u>	DEPTH: <u>8'-3"</u>
INSTALL DATE: <u>4/26/96</u>	SCREEN TYPE/SIZE: <u>Sched. 40 PVC, 0.010 in. mach. slot</u>	
TSEC REP.: <u>B. Wagner</u>	RISER TYPE: <u>Sched 40 PVC</u>	
DRILLING CO.: <u>TSEC</u>	RISER DIA.: <u>1"</u>	DEPTH: <u>3'-0"</u>
DRILLING METHOD: <u>Geoprobe</u>	GUARD TYPE: <u>Flush Mount Road Box</u>	
SAMPLING METHOD: <u>N/A</u>	RISER CAP:	

DEPTH IN FEET	WELL PROFILE	SAMPLE DEPTH (FT)	PID (PPMV)	BLOWS* AND RECOVERY	SOIL DESCRIPTION AND NOTES	LEGEND
1					<p>- Augered to 8.0'. Similar Materials to MW-1, MW-2</p>	<div style="display: flex; flex-direction: column; gap: 5px;"> <div> CEMENT GROUT</div> <div> NATIVE BACKFILL</div> <div> BENTONITE SEAL</div> <div> SAND PACK</div> <div> WELL SCREEN</div> <div> RISER PIPE</div> <div> WATER LEVEL (APPROX)</div> </div>
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GRANULAR SOILS

BLOWS/FT	DENSITY
0-4	V. LOOSE
4-10	LOOSE
10-30	M. DENSE
30-50	DENSE
>50	V. DENSE

COHESIVE SOILS

BLOWS/FT	DENSITY
<2	V. SOFT
2-4	SOFT
4-8	M. STIFF
8-15	STIFF
15-30	V. STIFF
>30	HARD

PROPORTIONS USED

TRACE	0-10%
LITTLE	10-20%
SOME	20-35%
AND	35-50%

NOTES:

1. The density of soils were determined by field observations. Ref. to blow counts may not be accurate due to stones, cobbles or boulders that may be encountered.

TWIN STATE ENVIRONMENTAL CORP.
MONITORING WELL/SOIL BORING LOG

PAGE 1 OF 1

WELL/BORING NO.: <u>MW-6</u>	DEPTH OF WELL: <u>105'</u>	DEPTH OF BORING: <u>11'</u>
PROJECT NAME: <u>Allen Lumber</u>	DEPTH TO WATER: <u>7.8'</u>	
PROJECT NO.: <u>96-012</u>	SCREEN DIA.: <u>1"</u>	DEPTH: <u>10.5'-5.5'</u>
INSTALL DATE: <u>4/26/96</u>	SCREEN TYPE/SIZE: Sched. 40 PVC, 0.010 in. mach. slot	
TSEC REP.: <u>B. Wagner</u>	RISER TYPE: Sched 40 PVC	
DRILLING CO.: <u>TSEC</u>	RISER DIA.: <u>1"</u>	DEPTH: <u>5.5'-0'</u>
DRILLING METHOD: <u>Geoprobe</u>	GUARD TYPE: <u>Flush Mount Road Box</u>	
SAMPLING METHOD: <u>n/a</u>	RISER CAP:	

DEPTH IN FEET	WELL PROFILE	SAMPLE DEPTH (FT)	PID (PPMV)	BLOWS* AND RECOVERY	SOIL DESCRIPTION AND NOTES	LEGEND
1					<p>- Augered to 10' - Refused.</p> <p>- Materials Similar to MW-1 & MW-2.</p>	<div style="display: flex; flex-direction: column; gap: 5px;"> <div> CEMENT GROUT</div> <div> NATIVE BACKFILL</div> <div> BENTONITE SEAL</div> <div> SAND PACK</div> <div> WELL SCREEN</div> <div> RISER PIPE</div> <div> WATER LEVEL (APPROX)</div> </div>
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GRANULAR SOILS BLOWS/FT DENSITY 0-4 V.LOOSE 4-10 LOOSE 10-30 M.DENSE 30-50 DENSE >50 V.DENSE	COHESIVE SOILS BLOWS/FT DENSITY <2 V.SOFT 2-4 SOFT 4-8 M.STIFF 8-15 STIFF 15-30 V.STIFF >30 HARD	PROPORTIONS USED TRACE 0-10% LITTLE 10-20% SOME 20-35% AND 35-50%
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NOTES:
 1. The density of soils were determined by field observations. Ref. to blow counts may not be accurate due to stones, cobbles or boulders that may be encountered.

APPENDIX B



MAY 24 REC'D

317 Elm Street
Milford, N.H. 03055
(603) 673-5440
FAX (603) 673-0366

May 20, 1996

Mr. Chris Covell
Twin State Environmental
Commercial Park 1A Huntington Rd
P O Box 719
Richmond VT 05477

Job Name	: Allen Lumber	Laboratory #	: E03-96-04
Job #	: 96012	Purchase Order #	: N/A
Location	: St. Albans, VT	Control #	: 17047

Dear Mr. Covell,

Enclosed please find the laboratory results for the above referenced samples which were received by the Chemserve sample custodian, under chain of custody control number 17047 on May 3, 1996. Samples were collected by Brian Wagner on May 2, 1996. Any abnormalities to the samples would be noted on the enclosed chain of custody document or laboratory report form. Chemserve follows protocols for analysis corresponding to the methods referenced unless a modification is noted. Unless otherwise stated, all holding times, preservation techniques and container types are analogous with those outlined by the U.S. EPA.

A formal quality assurance/quality control QA/QC program is maintained and updated by Chemserve on a routine basis. This QA/QC manual is available upon request.

This report is not valid without a completed Chemserve chain of custody with the corresponding control number, attached.

If you have questions or concerns regarding this analysis, please feel free to contact me.

Sincerely,


Jay W. Chrystal
President/Laboratory Director

Enclosures





**VOLATILE ORGANIC ANALYSIS
EPA METHOD 8020**

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-1

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/13/96

MATRIX: LIQUID

COMPOUND

CONCENTRATION

DETECTION LIMIT MULTIPLIER:

(UG/L)

(UG/L) X 1

BENZENE

BDL

1

METHYL-TERTIARY-BUTYL ETHER

BDL

1

TOLUENE

BDL

1

ETHYLBENZENE

BDL

1

TOTAL XYLENES

BDL

1

BDL = BELOW DETECTION LIMIT

ANALYZED BY: DM

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-1

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/07/96

DATE EXTRACTED: 05/06/96

MATRIX: LIQUID

COMPOUND

CONCENTRATION
(UG/L)

DETECTION LIMIT MULTIPLIER:
(UG/L) X 1

2-Chlorophenol	BDL	10
2-Chloronaphthalene	BDL	10
4-Chlorophenyl-phenyl-ether	BDL	10
1,4-Dichlorobenzene	BDL	10
1,3-Dichlorobenzene	BDL	10
1,2-Dichlorobenzene	BDL	10
bis(2-chloroethoxy)methane	BDL	10
bis(2-chloroisopropyl)ether	BDL	10
bis(2-chloroethyl)ether	BDL	10
n-Nitroso-di-n-propylamine	BDL	10
2-Methylnaphthalene	BDL	10
2,4-Dichlorophenol	BDL	10
2,4-Dimethylphenol	BDL	10
2,4-Dinitrophenol	BDL	10
4-Chloroaniline	BDL	10
4-Chloro-3-methylphenol	BDL	10
Hexachlorobutadiene	BDL	10
Hexachlorocyclopentadiene	BDL	10
2,4,5-Trichlorophenol	BDL	10
2,4,6-Trichlorophenol	BDL	10
2-Nitroaniline	BDL	10
3-Nitroaniline	BDL	10
4-Nitroaniline	BDL	10
2,4-Dinitrotoluene	BDL	10
2,6-Dinitrotoluene	BDL	10
4,6-Dinitro-2-methylphenol	BDL	10
n-Nitrosodimethylamine	BDL	10
n-Nitrosodiphenylamine	BDL	10
1,2-Diphenyl hydrazine	BDL	10
4-Bromophenyl-phenylether	BDL	10
Hexachlorobenzene	BDL	10
Hexachloroethane	BDL	10
Pentachlorophenol	BDL	10
Acenaphthylene	BDL	10
Acenaphthene	BDL	10
Phenanthrene	BDL	10
Anthracene	BDL	10
Fluoranthene	BDL	10
Pyrene	BDL	10
Chrysene	BDL	10

CONTINUED: 1 OF 2 PAGES

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-1

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/07/96

DATE EXTRACTED: 05/06/96

MATRIX: LIQUID

COMPOUND	CONCENTRATION (UG/L)	DETECTION LIMIT MULTIPLIER: (UG/L) X 1
Benzo[a]anthracene	BDL	10
3,3'-Dichlorobenzidine	BDL	10
Butylbenzylphthalate	BDL	10
bis(2-Ethylhexyl)phthalate	BDL	10
Di-n-butylphthalate	BDL	10
Di-n-octylphthalate	BDL	10
Dimethylphthalate	BDL	10
Diethylphthalate	BDL	10
Fluorene	BDL	10
2-Methylphenol	BDL	10
4-Methylphenol	BDL	10
2-Nitrophenol	BDL	10
4-Nitrophenol	BDL	10
Phenol	BDL	10
Isophorone	BDL	10
Benzidine	BDL	10
Azobenzene	BDL	10
Nitrobenzene	BDL	10
1,2,4-Trichlorobenzene	BDL	10
Dibenzofuran	BDL	10
Benzo[b]fluoranthene	BDL	10
Benzo[k]fluoranthene	BDL	10
Benzo[a]pyrene	BDL	10
Indeno[1,2,3-cd]pyrene	BDL	10
Dibenzo[a,h]anthracene	BDL	10
Benzo[g,h,i]perylene	BDL	10
Benzoic acid	BDL	50
Benzyl Alcohol	BDL	50

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-FLUOROPHENOL	49%	33-117%
PHENOL-D5	33%	29-113%
NITROBENZENE-D5	46%	36-120%
2-FLUOROBIPHENYL	50%	38-115%
2,4,6-TRIBROMOPHENOL	53%	19-109%
TERPHENYL-D14	72%	45-131%

BDL=BELOW DETECTION LIMIT
ANALYZED BY: CR



**VOLATILE ORGANIC ANALYSIS
EPA METHOD 8020**

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-2

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/13/96

MATRIX: LIQUID

COMPOUND

**CONCENTRATION
(UG/L)**

**DETECTION LIMIT MULTIPLIER:
(UG/L) X 1**

BENZENE

BDL

1

METHYL-TERTIARY-BUTYL ETHER

BDL

1

TOLUENE

BDL

1

ETHYLBENZENE

BDL

1

TOTAL XYLENES

BDL

1

BDL=BELOW DETECTION LIMIT

ANALYZED BY: DM



SEMIVOLATILE ORGANIC ANALYSIS
EPA METHOD 8270

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-2

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/07/96

DATE EXTRACTED: 05/06/96

MATRIX: LIQUID

COMPOUND	CONCENTRATION (UG/L)	DETECTION LIMIT MULTIPLIER: (UG/L) X 1
2-Chlorophenol	BDL	10
2-Chloronaphthalene	BDL	10
4-Chlorophenyl-phenyl-ether	BDL	10
1,4-Dichlorobenzene	BDL	10
1,3-Dichlorobenzene	BDL	10
1,2-Dichlorobenzene	BDL	10
bis(2-chloroethoxy)methane	BDL	10
bis(2-chloroisopropyl)ether	BDL	10
bis(2-chloroethyl)ether	BDL	10
n-Nitroso-di-n-propylamine	BDL	10
2-Methylnaphthalene	BDL	10
2,4-Dichlorophenol	BDL	10
2,4-Dimethylphenol	BDL	10
2,4-Dinitrophenol	BDL	10
4-Chloroaniline	BDL	10
4-Chloro-3-methylphenol	BDL	10
Hexachlorobutadiene	BDL	10
Hexachlorocyclopentadiene	BDL	10
2,4,5-Trichlorophenol	BDL	10
2,4,6-Trichlorophenol	BDL	10
2-Nitroaniline	BDL	10
3-Nitroaniline	BDL	10
4-Nitroaniline	BDL	10
2,4-Dinitrotoluene	BDL	10
2,6-Dinitrotoluene	BDL	10
4,6-Dinitro-2-methylphenol	BDL	10
n-Nitrosodimethylamine	BDL	10
n-Nitrosodiphenylamine	BDL	10
1,2-Diphenyl hydrazine	BDL	10
4-Bromophenyl-phenylether	BDL	10
Hexachlorobenzene	BDL	10
Hexachloroethane	BDL	10
Pentachlorophenol	BDL	10
Acenaphthylene	BDL	10
Acenaphthene	BDL	10
Phenanthrene	BDL	10
Anthracene	BDL	10
Fluoranthene	BDL	10
Pyrene	BDL	10
Chrysene	BDL	10

CONTINUED: 1 OF 2 PAGES

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-2

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/07/96

DATE EXTRACTED: 05/06/96

MATRIX: LIQUID

COMPOUND	CONCENTRATION (UG/L)	DETECTION LIMIT MULTIPLIER: (UG/L) X 1
Benzo[a]anthracene	BDL	10
3,3'-Dichlorobenzidine	BDL	10
Butylbenzylphthalate	BDL	10
bis(2-Ethylhexyl)phthalate	BDL	10
Di-n-butylphthalate	BDL	10
Di-n-octylphthalate	BDL	10
Dimethylphthalate	BDL	10
Diethylphthalate	BDL	10
Fluorene	BDL	10
2-Methylphenol	BDL	10
4-Methylphenol	BDL	10
2-Nitrophenol	BDL	10
4-Nitrophenol	BDL	10
Phenol	BDL	10
Isophorone	BDL	10
Benzidine	BDL	10
Azobenzene	BDL	10
Nitrobenzene	BDL	10
1,2,4-Trichlorobenzene	BDL	10
Dibenzofuran	BDL	10
Benzo[b]fluoranthene	BDL	10
Benzo[k]fluoranthene	BDL	10
Benzo[a]pyrene	BDL	10
Indeno[1,2,3-cd]pyrene	BDL	10
Dibenzo[a,h]anthracene	BDL	10
Benzo[g,h,i]perylene	BDL	10
Benzoic acid	BDL	50
Benzyl Alcohol	BDL	50

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-FLUOROPHENOL	38%	33-117%
PHENOL-D5	27%*	29-113%
NITROBENZENE-D5	44%	36-120%
2-FLUOROBIPHENYL	32%*	38-115%
2,4,6-TRIBROMOPHENOL	47%	19-109%
TERPHENYL-D14	59%	45-131%

*ONE ACID AND/OR ONE BASE SURROGATE PER EXTRACT MAY BE OUTSIDE

THE LIMITS ACCORDING TO THE QC STANDARDS

BDL = BELOW DETECTION LIMIT

ANALYZED BY: CR



**VOLATILE ORGANIC ANALYSIS
EPA METHOD 8020**

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-3

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/13/96

MATRIX: LIQUID

COMPOUND

**CONCENTRATION
(UG/L)**

**DETECTION LIMIT MULTIPLIER:
(UG/L) X 1**

BENZENE

BDL

1

METHYL-TERTIARY-BUTYL ETHER

BDL

1

TOLUENE

17

1

ETHYLBENZENE

BDL

1

TOTAL XYLENES

BDL

1

BDL= BELOW DETECTION LIMIT

ANALYZED BY: DM



SEMIVOLATILE ORGANIC ANALYSIS
EPA METHOD 8270

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-3

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/07/96

DATE EXTRACTED: 05/06/96

MATRIX: LIQUID

COMPOUND	CONCENTRATION (UG/L)	DETECTION LIMIT MULTIPLIER: (UG/L) X 1
2-Chlorophenol	BDL	10
2-Chloronaphthalene	BDL	10
4-Chlorophenyl-phenyl-ether	BDL	10
1,4-Dichlorobenzene	BDL	10
1,3-Dichlorobenzene	BDL	10
1,2-Dichlorobenzene	BDL	10
bis(2-chloroethoxy)methane	BDL	10
bis(2-chloroisopropyl)ether	BDL	10
bis(2-chloroethyl)ether	BDL	10
n-Nitroso-di-n-propylamine	BDL	10
2-Methylnaphthalene	BDL	10
2,4-Dichlorophenol	BDL	10
2,4-Dimethylphenol	BDL	10
2,4-Dinitrophenol	BDL	10
4-Chloroaniline	BDL	10
4-Chloro-3-methylphenol	BDL	10
Hexachlorobutadiene	BDL	10
Hexachlorocyclopentadiene	BDL	10
2,4,5-Trichlorophenol	BDL	10
2,4,6-Trichlorophenol	BDL	10
2-Nitroaniline	BDL	10
3-Nitroaniline	BDL	10
4-Nitroaniline	BDL	10
2,4-Dinitrotoluene	BDL	10
2,6-Dinitrotoluene	BDL	10
4,6-Dinitro-2-methylphenol	BDL	10
n-Nitrosodimethylamine	BDL	10
n-Nitrosodiphenylamine	BDL	10
1,2-Diphenyl hydrazine	BDL	10
4-Bromophenyl-phenylether	BDL	10
Hexachlorobenzene	BDL	10
Hexachloroethane	BDL	10
Pentachlorophenol	BDL	10
Acenaphthylene	BDL	10
Acenaphthene	BDL	10
Phenanthrene	BDL	10
Anthracene	BDL	10
Fluoranthene	BDL	10
Pyrene	BDL	10
Chrysene	BDL	10

CONTINUED: 1 OF 2 PAGES

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-3

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/07/96

DATE EXTRACTED: 05/06/96

MATRIX: LIQUID

COMPOUND	CONCENTRATION (UG/L)	DETECTION LIMIT MULTIPLIER: (UG/L) X 1
Benzo[a]anthracene	BDL	10
3,3'-Dichlorobenzidine	BDL	10
Butylbenzylphthalate	BDL	10
bis(2-Ethylhexyl)phthalate	BDL	10
Di-n-butylphthalate	BDL	10
Di-n-octylphthalate	BDL	10
Dimethylphthalate	BDL	10
Diethylphthalate	BDL	10
Fluorene	BDL	10
2-Methylphenol	BDL	10
4-Methylphenol	BDL	10
2-Nitrophenol	BDL	10
4-Nitrophenol	BDL	10
Phenol	BDL	10
Isophorone	BDL	10
Benzidine	BDL	10
Azobenzene	BDL	10
Nitrobenzene	BDL	10
1,2,4-Trichlorobenzene	BDL	10
Dibenzofuran	BDL	10
Benzo[b]fluoranthene	BDL	10
Benzo[k]fluoranthene	BDL	10
Benzo[a]pyrene	BDL	10
Indeno[1,2,3-cd]pyrene	BDL	10
Dibenzo[a,h]anthracene	BDL	10
Benzo[g,h,i]perylene	BDL	10
Benzoic acid	BDL	50
Benzyl Alcohol	BDL	50

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-FLUOROPHENOL	51%	33-117%
PHENOL-D5	35%	29-113%
NITROBENZENE-D5	42%	36-120%
2-FLUOROBIPHENYL	42%	38-115%
2,4,6-TRIBROMOPHENOL	37%	19-109%
TERPHENYL-D14	69%	45-131%

BDL=BELOW DETECTION LIMIT
ANALYZED BY: CR



**VOLATILE ORGANIC ANALYSIS
EPA METHOD 8020**

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-4

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/13/96

MATRIX: LIQUID

COMPOUND	CONCENTRATION	DETECTION LIMIT MULTIPLIER:
	(UG/L)	(UG/L) X 1
BENZENE	BDL	1
METHYL-TERTIARY-BUTYL ETHER	BDL	1
TOLUENE	8	1
ETHYLBENZENE	BDL	1
TOTAL XYLENES	BDL	1

BDL=BELOW DETECTION LIMIT

ANALYZED BY: DM

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-4

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/07/96

DATE EXTRACTED: 05/06/96

MATRIX: LIQUID

COMPOUND	CONCENTRATION (UG/L)	DETECTION LIMIT MULTIPLIER: (UG/L) X 1
2-Chlorophenol	BDL	10
2-Chloronaphthalene	BDL	10
4-Chlorophenyl-phenyl-ether	BDL	10
1,4-Dichlorobenzene	BDL	10
1,3-Dichlorobenzene	BDL	10
1,2-Dichlorobenzene	BDL	10
bis(2-chloroethoxy)methane	BDL	10
bis(2-chloroisopropyl)ether	BDL	10
bis(2-chloroethyl)ether	BDL	10
n-Nitroso-di-n-propylamine	BDL	10
2-Methylnaphthalene	BDL	10
2,4-Dichlorophenol	BDL	10
2,4-Dimethylphenol	BDL	10
2,4-Dinitrophenol	BDL	10
4-Chloroaniline	BDL	10
4-Chloro-3-methylphenol	BDL	10
Hexachlorobutadiene	BDL	10
Hexachlorocyclopentadiene	BDL	10
2,4,5-Trichlorophenol	BDL	10
2,4,6-Trichlorophenol	BDL	10
2-Nitroaniline	BDL	10
3-Nitroaniline	BDL	10
4-Nitroaniline	BDL	10
2,4-Dinitrotoluene	BDL	10
2,6-Dinitrotoluene	BDL	10
4,6-Dinitro-2-methylphenol	BDL	10
n-Nitrosodimethylamine	BDL	10
n-Nitrosodiphenylamine	BDL	10
1,2-Diphenyl hydrazine	BDL	10
4-Bromophenyl-phenylether	BDL	10
Hexachlorobenzene	BDL	10
Hexachloroethane	BDL	10
Pentachlorophenol	BDL	10
Acenaphthylene	BDL	10
Acenaphthene	BDL	10
Phenanthrene	BDL	10
Anthracene	BDL	10
Fluoranthene	BDL	10
Pyrene	BDL	10
Chrysene	BDL	10

CONTINUED: 1 OF 2 PAGES

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-4

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/07/96

DATE EXTRACTED: 05/06/96

MATRIX: LIQUID

COMPOUND	CONCENTRATION (UG/L)	DETECTION LIMIT MULTIPLIER: (UG/L) X 1
Benzo[a]anthracene	BDL	10
3,3'-Dichlorobenzidine	BDL	10
Butylbenzylphthalate	BDL	10
bis(2-Ethylhexyl)phthalate	BDL	10
Di-n-butylphthalate	BDL	10
Di-n-octylphthalate	BDL	10
Dimethylphthalate	BDL	10
Diethylphthalate	BDL	10
Fluorene	BDL	10
2-Methylphenol	BDL	10
4-Methylphenol	BDL	10
2-Nitrophenol	BDL	10
4-Nitrophenol	BDL	10
Phenol	BDL	10
Isophorone	BDL	10
Benzidine	BDL	10
Azobenzene	BDL	10
Nitrobenzene	BDL	10
1,2,4-Trichlorobenzene	BDL	10
Dibenzofuran	BDL	10
Benzo[b]fluoranthene	BDL	10
Benzo[k]fluoranthene	BDL	10
Benzo[a]pyrene	BDL	10
Indeno[1,2,3-cd]pyrene	BDL	10
Dibenzo[a,h]anthracene	BDL	10
Benzo[g,h,i]perylene	BDL	10
Benzoic acid	BDL	50
Benzyl Alcohol	BDL	50

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-FLUOROPHENOL	35%	33-117%
PHENOL-D5	23%*	29-113%
NITROBENZENE-D5	39%	36-120%
2-FLUOROBIPHENYL	28%*	38-115%
2,4,6-TRIBROMOPHENOL	40%	19-109%
TERPHENYL-D14	67%	45-131%

*ONE ACID AND/OR ONE BASE SURROGATE PER EXTRACT MAY BE OUTSIDE

THE LIMITS ACCORDING TO THE QC STANDARDS

BDL=BELOW DETECTION LIMIT

ANALYZED BY: CR



**VOLATILE ORGANIC ANALYSIS
EPA METHOD 8020**

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-5

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/13/96

MATRIX: LIQUID

COMPOUND	CONCENTRATION (UG/L)	DETECTION LIMIT MULTIPLIER: (UG/L) X 1
BENZENE	BDL	1
METHYL-TERTIARY-BUTYL ETHER	BDL	1
TOLUENE	BDL	1
ETHYLBENZENE	BDL	1
TOTAL XYLENES	BDL	1

BDL=BELOW DETECTION LIMIT

ANALYZED BY: DM

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-5

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/07/96

DATE EXTRACTED: 05/06/96

MATRIX: LIQUID

COMPOUND	CONCENTRATION (UG/L)	DETECTION LIMIT MULTIPLIER: (UG/L) X 3
2-Chlorophenol	BDL	10
2-Chloronaphthalene	BDL	10
4-Chlorophenyl-phenyl-ether	BDL	10
1,4-Dichlorobenzene	BDL	10
1,3-Dichlorobenzene	BDL	10
1,2-Dichlorobenzene	BDL	10
bis(2-chloroethoxy)methane	BDL	10
bis(2-chloroisopropyl)ether	BDL	10
bis(2-chloroethyl)ether	BDL	10
n-Nitroso-di-n-propylamine	BDL	10
2-Methylnaphthalene	BDL	10
2,4-Dichlorophenol	BDL	10
2,4-Dimethylphenol	BDL	10
2,4-Dinitrophenol	BDL	10
4-Chloroaniline	BDL	10
4-Chloro-3-methylphenol	BDL	10
Hexachlorobutadiene	BDL	10
Hexachlorocyclopentadiene	BDL	10
2,4,5-Trichlorophenol	BDL	10
2,4,6-Trichlorophenol	BDL	10
2-Nitroaniline	BDL	10
3-Nitroaniline	BDL	10
4-Nitroaniline	BDL	10
2,4-Dinitrotoluene	BDL	10
2,6-Dinitrotoluene	BDL	10
4,6-Dinitro-2-methylphenol	BDL	10
n-Nitrosodimethylamine	BDL	10
n-Nitrosodiphenylamine	BDL	10
1,2-Diphenyl hydrazine	BDL	10
4-Bromophenyl-phenylether	BDL	10
Hexachlorobenzene	BDL	10
Hexachloroethane	BDL	10
Pentachlorophenol	BDL	10
Acenaphthylene	BDL	10
Acenaphthene	BDL	10
Phenanthrene	BDL	10
Anthracene	BDL	10
Fluoranthene	BDL	10
Pyrene	BDL	10
Chrysene	BDL	10

CONTINUED: 1 OF 2 PAGES



SEMIVOLATILE ORGANIC ANALYSIS
EPA METHOD 8270

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-5

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/07/96

DATE EXTRACTED: 05/06/96

MATRIX: LIQUID

COMPOUND	CONCENTRATION (UG/L)	DETECTION LIMIT MULTIPLIER: (UG/L) X 3
Benzo[a]anthracene	BDL	10
3,3'-Dichlorobenzidine	BDL	10
Butylbenzylphthalate	BDL	10
bis(2-Ethylhexyl)phthalate	BDL	10
Di-n-butylphthalate	BDL	10
Di-n-octylphthalate	BDL	10
Dimethylphthalate	BDL	10
Diethylphthalate	BDL	10
Fluorene	BDL	10
2-Methylphenol	BDL	10
4-Methylphenol	BDL	10
2-Nitrophenol	BDL	10
4-Nitrophenol	BDL	10
Phenol	BDL	10
Isophorone	BDL	10
Benzidine	BDL	10
Azobenzene	BDL	10
Nitrobenzene	BDL	10
1,2,4-Trichlorobenzene	BDL	10
Dibenzofuran	BDL	10
Benzo[b]fluoranthene	BDL	10
Benzo[k]fluoranthene	BDL	10
Benzo[a]pyrene	BDL	10
Indeno[1,2,3-cd]pyrene	BDL	10
Dibenzo[a,h]anthracene	BDL	10
Benzo[g,h,i]perylene	BDL	50
Benzoic acid	BDL	50
Benzyl Alcohol	BDL	50
SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-FLUOROPHENOL	41%	33-117%
PHENOL-D5	35%	29-113%
NITROBENZENE-D5	41%	36-120%
2-FLUOROBIPHENYL	35%*	38-115%
2,4,6-TRIBROMOPHENOL	38%	19-109%
TERPHENYL-D14	60%	45-131%

NOTE: NON-TARGET COMPOUNDS PRESENT

*ONE ACID AND/OR ONE BASE SURROGATE PER EXTRACT MAY BE OUTSIDE
THE LIMITS ACCORDING TO THE QC STANDARDS

BDL = BELOW DETECTION LIMIT

ANALYZED BY: CR



**VOLATILE ORGANIC ANALYSIS
EPA METHOD 8020**

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-6

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/13/96

MATRIX: LIQUID

COMPOUND

**CONCENTRATION
(UG/L)**

**DETECTION LIMIT MULTIPLIER:
(UG/L) X 1**

BENZENE

BDL

1

METHYL-TERTIARY-BUTYL ETHER

BDL

1

TOLUENE

BDL

1

ETHYLBENZENE

BDL

1

TOTAL XYLENES

BDL

1

BDL=BELOW DETECTION LIMIT

ANALYZED BY: DM

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-6

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/07/96

DATE EXTRACTED: 05/06/96

MATRIX: LIQUID

COMPOUND	CONCENTRATION (UG/L)	DETECTION LIMIT MULTIPLIER: (UG/L) X 4
2-Chlorophenol	BDL	10
2-Chloronaphthalene	BDL	10
4-Chlorophenyl-phenyl-ether	BDL	10
1,4-Dichlorobenzene	BDL	10
1,3-Dichlorobenzene	BDL	10
1,2-Dichlorobenzene	BDL	10
bis(2-chloroethoxy)methane	BDL	10
bis(2-chloroisopropyl)ether	BDL	10
bis(2-chloroethyl)ether	BDL	10
n-Nitroso-di-n-propylamine	BDL	10
2-Methylnaphthalene	BDL	10
2,4-Dichlorophenol	BDL	10
2,4-Dimethylphenol	BDL	10
2,4-Dinitrophenol	BDL	10
4-Chloroaniline	BDL	10
4-Chloro-3-methylphenol	BDL	10
Hexachlorobutadiene	BDL	10
Hexachlorocyclopentadiene	BDL	10
2,4,5-Trichlorophenol	BDL	10
2,4,6-Trichlorophenol	BDL	10
2-Nitroaniline	BDL	10
3-Nitroaniline	BDL	10
4-Nitroaniline	BDL	10
2,4-Dinitrotoluene	BDL	10
2,6-Dinitrotoluene	BDL	10
4,6-Dinitro-2-methylphenol	BDL	10
n-Nitrosodimethylamine	BDL	10
n-Nitrosodiphenylamine	BDL	10
1,2-Diphenyl hydrazine	BDL	10
4-Bromophenyl-phenylether	BDL	10
Hexachlorobenzene	BDL	10
Hexachloroethane	BDL	10
Pentachlorophenol	BDL	10
Acenaphthylene	BDL	10
Acenaphthene	BDL	10
Phenanthrene	BDL	10
Anthracene	BDL	10
Fluoranthene	BDL	10
Pyrene	BDL	10
Chrysene	BDL	10

CONTINUED: 1 OF 2 PAGES

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-6

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/07/96

DATE EXTRACTED: 05/06/96

MATRIX: LIQUID

COMPOUND	CONCENTRATION (UG/L)	DETECTION LIMIT MULTIPLIER: (UG/L) X 4
Benzo[a]anthracene	BDL	10
3,3'-Dichlorobenzidine	BDL	10
Butylbenzylphthalate	BDL	10
bis(2-Ethylhexyl)phthalate	BDL	10
Di-n-butylphthalate	BDL	10
Di-n-octylphthalate	BDL	10
Dimethylphthalate	BDL	10
Diethylphthalate	BDL	10
Fluorene	BDL	10
2-Methylphenol	BDL	10
4-Methylphenol	BDL	10
2-Nitrophenol	BDL	10
4-Nitrophenol	BDL	10
Phenol	BDL	10
Isophorone	BDL	10
Benzidine	BDL	10
Azobenzene	BDL	10
Nitrobenzene	BDL	10
1,2,4-Trichlorobenzene	BDL	10
Dibenzofuran	BDL	10
Benzo[b]fluoranthene	BDL	10
Benzo[k]fluoranthene	BDL	10
Benzo[a]pyrene	BDL	10
Indeno[1,2,3-cd]pyrene	BDL	10
Dibenzo[a,h]anthracene	BDL	10
Benzo[g,h,i]perylene	BDL	10
Benzoic acid	BDL	50
Benzyl Alcohol	BDL	50
SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-FLUOROPHENOL	44%	33-117%
PHENOL-D5	34%	29-113%
NITROBENZENE-D5	45%	36-120%
2-FLUOROBIPHENYL	24%*	38-115%
2,4,6-TRIBROMOPHENOL	33%	19-109%
TERPHENYL-D14	56%	45-131%

NOTE: NON-TARGET COMPOUNDS PRESENT

*ONE ACID AND/OR ONE BASE SURROGATE PER EXTRACT MAY BE OUTSIDE

THE LIMITS ACCORDING TO THE QC STANDARDS

BDL=BELOW DETECTION LIMIT

ANALYZED BY: CR

**VOLATILE ORGANIC ANALYSIS
EPA METHOD 8020**

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: DUP-1

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/13/96

MATRIX: LIQUID

COMPOUND

**CONCENTRATION
(UG/L)**

**DETECTION LIMIT MULTIPLIER:
(UG/L) X 1**

BENZENE

BDL

1

METHYL-TERTIARY-BUTYL ETHER

BDL

1

TOLUENE

16

1

ETHYLBENZENE

BDL

1

TOTAL XYLENES

BDL

1

BDL=BELOW DETECTION LIMIT

ANALYZED BY: DM



**VOLATILE ORGANIC ANALYSIS
EPA METHOD 8020**

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: TB

CONTROL#: 17047

DATE SAMPLED: 05/02/96

DATE REC'D: 05/03/96

DATE ANALYZED: 05/13/96

MATRIX: LIQUID

COMPOUND

**CONCENTRATION
(UG/L)**

**DETECTION LIMIT MULTIPLIER:
(UG/L) X 1**

BENZENE

BDL

1

METHYL-TERTIARY-BUTYL ETHER

BDL

1

TOLUENE

BDL

1

ETHYLBENZENE

BDL

1

TOTAL XYLENES

BDL

1

BDL= BELOW DETECTION LIMIT

ANALYZED BY: DM



TWIN STATE ENVIRONMENTAL CORP.

LABORATORY # : E03-96-04

CONTROL # : 17047

DATE SAMPLED : 05/02/96

JOB NAME : ALLEN LUMBER

JOB # : 96012

LOCATION : ST. ALBANS, VT

QUALITY CONTROL STATEMENT

All samples analyzed by Chemserve are subject to quality standards. These standards are either as stringent or more stringent than those established under 40 CFR Part 136, state certification programs, and corresponding methodologies. Chemserve has a written QA/QC Procedures Manual which outlines these standards, and is available, upon request, for your reference. Written reports and validation summaries comply with established quality guidelines with the exception of any deviations already noted within the report.

Certification:

I certify that I have reviewed the above referenced analytical data and written report, and I have found this report within compliance with the procedures outlined in the Chemserve QA/QC Procedures Manual.

Certified by: Linda Carleton-Henderson
Linda Carleton-Henderson, QA/QC Administrator

qaqcstm/Revised 04/04/96

SPIKE RECOVERY FORM
EPA METHOD 8020

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

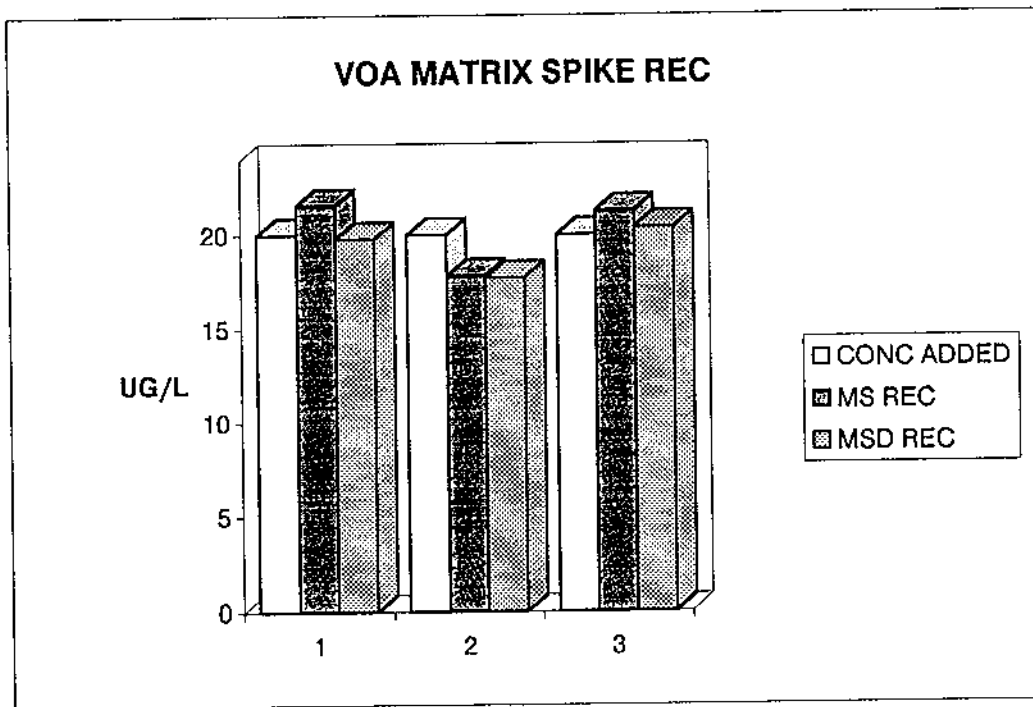
JOB#: 96012

SAMPLE IDENTITY: QC SPIKES / 17047

CONTROL#: 17047

DATE ANALYZED: 05/13/96

COMPOUND	CONC ADDED (UG/L)	AMT REC (UG/L)	DUP AMT REC (UG/L)	%REC	DUP % REC	%DIFF
BENZENE	20	21.55	19.79	108%	99%	9%
TOLUENE	20	17.81	17.70	89%	89%	1%
CHLOROBENZENE	20	21.24	20.35	106%	102%	4%



CONTROL LIMITS +,- 25%

SEMIVOLATILE ORGANIC ANALYSIS
EPA METHOD 8270

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E03-96-04

SAMPLE LOCATION: ALLEN LUMBER ST ALBANS, VT

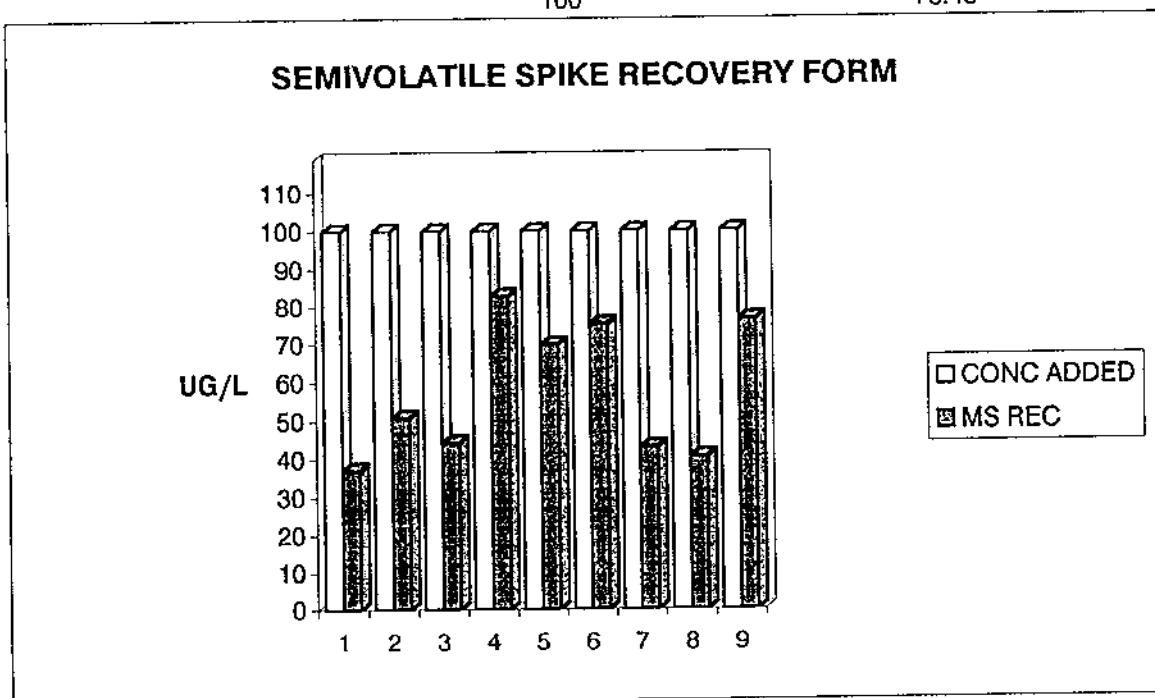
JOB#: 96012

SAMPLE IDENTITY: QC SPIKE / 17047

CONTROL#: 17047

DATE ANALYZED: 05/07/96

COMPOUND	CONC ADDED (UG/L)	AMT REC (UG/L)	%RECOVERY
PHENOL	100	37.15	37%
2-CHLOROPHENOL	100	50.86	51%
1,4-DICHLOROBENZENE	100	44.30	44%
4-CHLORO-3-METHYLPHENOL	100	82.63	83%
ACENAPHTHENE	100	69.87	70%
4-NITROPHENOL	100	75.28	75%
2,4-DINITROTOLUENE	100	43.08	43%
PENTACHLOROPHENOL	100	40.54	41%
PYRENE	100	76.43	76%



SPIKE RECOVERY LIMITS

PHENOL 26-100%
 2-CHLOROPHENOL 25-102%
 1,4-DICHLOROBENZENE 28-104%
 4-CHLORO-3-METHYLPHENOL 26-103%
 ACENAPHTHENE 31-137%
 4-NITROPHENOL 11-114%
 2,4-DINITROTOLUENE 28-104%
 PENTACHLOROPHENOL 17-109%
 PYRENE 35-142%

EQ3-96-04
CONTROL NO. 17047

5/15/96
5/17/96



317 Elm Street
Milford, NH 03055
(603) 673-5440
FAX (603) 673-0366

CHAIN OF CUSTODY

A CUSTOMER INFORMATION

CUSTOMER: TWIN STATE ENVIRONMENTAL
ADDRESS: 1A Huntington Rd Richmond, NH 03347
TELEPHONE: 603-434-3350
CONTACT PERSON: Chris Noel
P.O. NUMBER: _____

B PROJECT INFORMATION

JOB NAME: Alpen Lumber
JOB NUMBER: 96012
LOCATION: ST. ALBANS, VT
TELEPHONE: _____
CONTACT PERSON: (PRINT) _____

C SAMPLE INFORMATION

TURNAROUND TIME: (CIRCLE ONE)

STANDARD

RUSH

RUSH T.A.T. _____ (Check with lab)

D	E	F	G	H	I	J	K	L
STATION #	SAMPLE IDENTIFICATION & LOCATION	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE GRAB COMP	MATRIX SOLID (S) LIQUID (L) COMBINED (C) HAZARD (H)	# OF CONTAINERS	CONTAINER & PRESERVATIVE	ANALYSIS
	MW-1	5/2/96	11:48	✓	L	2	2	8020; 8270
	MW-2		12:00	✓	L	2	2	8020; 8270
	MW-3		12:15	✓	L	4	2	8020; 8270
	MW-4		12:18	✓	L	4	2	8020; 8270
	MW-5				L	3	2	8020; 8270
	MW-6		12:30	✓	L	3	2	8020; 8270
	DUP-1		12:30	✓	L	2	2	8020
	T.B.		11:24	✓	L	2	2	8020

M CUSTODY	
(PRINT NAME) <u>Brian Wagner</u>	MILITARY <u>5/2/96</u>
SAMPLER: _____	DATE/TIME: <u>15:00</u>
RELINQUISHED: <u>Brian W</u>	MILITARY <u>5/2/96</u>
RECEIVED: <u>[Signature]</u>	DATE/TIME: <u>15:00</u>
RELINQUISHED: _____	MILITARY <u>5-2-96</u>
RECEIVED FOR LABORATORY: <u>[Signature]</u>	DATE/TIME: <u>15:00</u>

LAB USE ONLY

A
B
C
D
E
F
G
H
I
J
K
L
M

The State of New Hampshire
Department of Environmental Services

CERTIFICATE OF APPROVAL
Drinking Water Analysis

Issued to
Chemsolve, Inc.

Located at

Elm Street, Milford, NH

Under the provisions of the Regulations in Env-C300
for the following analyses:

FULL CERTIFICATION: Total Coliform by Membrane Filtration, Fecal Coliform by Membrane Filtration, Colilert-MPN, Metals by Graphite Furnace, Metals by ICP, Mercury, Nitrate-N, Fluoride, Nitrite-N, Turbidity, Total Filterable Residue, Calcium, pH, Alkalinity, Corrosivity, Sodium, Sulfate, Trihalomethanes, Volatile Organics, Vinyl Chloride, and EDB.

PROVISIONAL CERTIFICATION: Total Cyanide.

REPLACES CERTIFICATE #100895-A

CERTIFICATE NUMBER: 100895-C

DATE OF ISSUE: December 19, 1995

EXPIRATION DATE: December 2, 1996

Charles M. Meyer
Certifying Officer

The State of New Hampshire
Department of Environmental Services

CERTIFICATE OF APPROVAL
Wastewater Analysis

Issued to
Chemsolve, Inc.

Located at

Elm Street, Milford, NH

Under the provisions of the Regulations in Env-C300
for the following analyses:

FULL CERTIFICATION: Total Coliform by Membrane Filtration, Fecal Coliform by Membrane Filtration, ICP Metals, Metals by Graphite Furnace, Mercury, pH, TDS, Total Hardness, Calcium, Magnesium, Sodium, Potassium, Total Alkalinity, Chloride, Fluoride, Sulfate, Ammonia, Nitrate-N, Orthophosphate, TKN, Total Phosphorus, COD, BOD, Total Cyanide, Non-Filterable Residue, Oil & Grease, Total Phenolics, PCBs in Water, PCBs in Oil, Pesticides, and Volatile Organics.

PROVISIONAL CERTIFICATION: None.

CERTIFICATE NUMBER: 100895-B

DATE OF ISSUE: December 3, 1995

EXPIRATION DATE: December 2, 1996

Charles M. Meyer
Certifying Officer

APPENDIX C



JUN 14 REC'D

317 Elm Street
Milford, N.H. 03055
(603) 673-5440
FAX (603) 673-0366

June 11, 1996

Mr. John Diego
Twin State Environmental
Commercial Park 1A Huntington Rd
P O Box 719
Richmond VT 05477

Job Name	: Allen Lumber	Laboratory #	: E24-96-09
Job #	: 96-012	Purchase Order #	: N/A
Location	: St. Albans, VT	Control #	: 17046

Dear Mr. Diego,

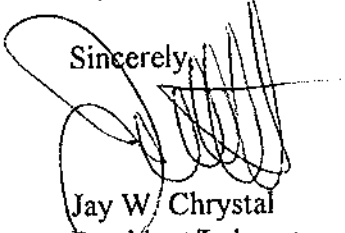
Enclosed please find the laboratory results for the above referenced samples which were received by the Chemserve sample custodian, under chain of custody control number 17046 on May 24, 1996. Samples were collected by Brian Wagner on May 23, 1996. Any abnormalities to the samples would be noted on the enclosed chain of custody document or laboratory report form. Chemserve follows protocols for analysis corresponding to the methods referenced unless a modification is noted. Unless otherwise stated, all holding times, preservation techniques and container types are analogous with those outlined by the U.S. EPA.

A formal quality assurance/quality control QA/QC program is maintained and updated by Chemserve on a routine basis. This QA/QC manual is available upon request.

This report is not valid without a completed Chemserve chain of custody with the corresponding control number, attached.

If you have questions or concerns regarding this analysis, please feel free to contact me.

Sincerely,


Jay W. Chrystal
President/Laboratory Director

Enclosures





**VOLATILE ORGANIC ANALYSIS
EPA METHOD 8020**

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-1

CONTROL#: 17046

DATE SAMPLED: 05/23/96

DATE REC'D: 05/24/96

DATE ANALYZED: 06/04/96

MATRIX: LIQUID

PERCENT MOISTURE: N/A

COMPOUND

**CONCENTRATION
(UG/L)**

**DETECTION LIMIT MULTIPLIER:
(UG/L) X 1**

BENZENE

BDL

1

METHYL-TERTIARY-BUTYL ETHER

BDL

1

TOLUENE

BDL

1

ETHYLBENZENE

BDL

1

TOTAL XYLENES

BDL

1

BDL = BELOW DETECTION LIMIT

ANALYZED BY: DM

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-1

CONTROL#: 17046

DATE SAMPLED: 05/23/96

DATE REC'D: 05/24/96

DATE ANALYZED: 06/06/96

DATE EXTRACTED: 05/30/96

MATRIX: LIQUID

PERCENT MOISTURE: N/A

COMPOUND

CONCENTRATION
(UG/L)

DETECTION LIMIT MULTIPLIER:
(UG/L) X 1

2-Chlorophenol	BDL	10
2-Chloronaphthalene	BDL	10
4-Chlorophenyl-phenyl-ether	BDL	10
1,4-Dichlorobenzene	BDL	10
1,3-Dichlorobenzene	BDL	10
1,2-Dichlorobenzene	BDL	10
bis(2-chloroethoxy)methane	BDL	10
bis(2-chloroisopropyl)ether	BDL	10
bis(2-chloroethyl)ether	BDL	10
n-Nitroso-di-n-propylamine	BDL	10
2-Methylnaphthalene	BDL	10
2,4-Dichlorophenol	BDL	10
2,4-Dimethylphenol	BDL	10
2,4-Dinitrophenol	BDL	10
4-Chloroaniline	BDL	10
4-Chloro-3-methylphenol	BDL	10
Hexachlorobutadiene	BDL	10
Hexachlorocyclopentadiene	BDL	10
2,4,5-Trichlorophenol	BDL	10
2,4,6-Trichlorophenol	BDL	10
2-Nitroaniline	BDL	10
3-Nitroaniline	BDL	10
4-Nitroaniline	BDL	10
2,4-Dinitrotoluene	BDL	10
2,6-Dinitrotoluene	BDL	10
4,6-Dinitro-2-methylphenol	BDL	10
n-Nitrosodimethylamine	BDL	10
n-Nitrosodiphenylamine	BDL	10
1,2-Diphenyl hydrazine	BDL	10
4-Bromophenyl-phenylether	BDL	10
Hexachlorobenzene	BDL	10
Hexachloroethane	BDL	10
Pentachlorophenol	BDL	10
Acenaphthylene	BDL	10
Acenaphthene	BDL	10
Phenanthrene	BDL	10
Anthracene	BDL	10
Fluoranthene	BDL	10
Pyrene	BDL	10
Chrysene	BDL	10

CONTINUED: 1 OF 2 PAGES

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-1

CONTROL#: 17046

DATE SAMPLED: 05/23/96

DATE REC'D: 05/24/96

DATE ANALYZED: 06/06/96

DATE EXTRACTED: 05/30/96

MATRIX: LIQUID

PERCENT MOISTURE: N/A

COMPOUND	CONCENTRATION (UG/L)	DETECTION LIMIT MULTIPLIER: (UG/L) X 1
Benzo[a]anthracene	BDL	10
3,3'-Dichlorobenzidine	BDL	10
Butylbenzylphthalate	BDL	10
bis(2-Ethylhexyl)phthalate	BDL	10
Di-n-butylphthalate	BDL	10
Di-n-octylphthalate	BDL	10
Dimethylphthalate	BDL	10
Diethylphthalate	BDL	10
Fluorene	BDL	10
2-Methylphenol	BDL	10
4-Methylphenol	BDL	10
2-Nitrophenol	BDL	10
4-Nitrophenol	BDL	10
Phenol	BDL	10
Isophorone	BDL	10
Benzidine	BDL	10
Azobenzene	BDL	10
Nitrobenzene	BDL	10
1,2,4-Trichlorobenzene	BDL	10
Dibenzofuran	BDL	10
Benzo[b]fluoranthene	BDL	10
Benzo[k]fluoranthene	BDL	10
Benzo[a]pyrene	BDL	10
Indeno[1,2,3-cd]pyrene	BDL	10
Dibenzo[a,h]anthracene	BDL	10
Benzo[g,h,i]perylene	BDL	10
Benzoic acid	BDL	50
Benzyl Alcohol	BDL	50

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-FLUOROPHENOL	33%	33-117%
PHENOL-D5	22%*	29-113%
NITROBENZENE-D5	51%	36-120%
2-FLUOROBIPHENYL	39%	38-115%
2,4,6-TRIBROMOPHENOL	61%	19-109%
TERPHENYL-D14	79%	45-131%

* ONE ACID AND/OR ON BASE SURROGATE PER EXTRACT MAY BE
OUTSIDE THE LIMITS ACCORDING TO THE QC STANDARDS

BDL=BELOW DETECTION LIMIT

ANALYZED BY: WN



**VOLATILE ORGANIC ANALYSIS
EPA METHOD 8020**

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-2

CONTROL#: 17046

DATE SAMPLED: 05/23/96

DATE REC'D: 05/24/96

DATE ANALYZED: 06/04/96

MATRIX: LIQUID

PERCENT MOISTURE: N/A

COMPOUND

CONCENTRATION

DETECTION LIMIT MULTIPLIER:

(UG/L)

(UG/L) X 1

BENZENE

BDL

1

METHYL-TERTIARY-BUTYL ETHER

BDL

1

TOLUENE

BDL

1

ETHYLBENZENE

BDL

1

TOTAL XYLENES

BDL

1

BDL=BELOW DETECTION LIMIT

ANALYZED BY: DM

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-2

CONTROL#: 17046

DATE SAMPLED: 05/23/96

DATE REC'D: 05/24/96

DATE ANALYZED: 06/06/96

DATE EXTRACTED: 05/30/96

MATRIX: LIQUID

PERCENT MOISTURE: N/A

COMPOUND

CONCENTRATION
(UG/L)

DETECTION LIMIT MULTIPLIER:
(UG/L) X 1

2-Chlorophenol	BDL	10
2-Chloronaphthalene	BDL	10
4-Chlorophenyl-phenyl-ether	BDL	10
1,4-Dichlorobenzene	BDL	10
1,3-Dichlorobenzene	BDL	10
1,2-Dichlorobenzene	BDL	10
bis(2-chloroethoxy)methane	BDL	10
bis(2-chloroisopropyl)ether	BDL	10
bis(2-chloroethyl)ether	BDL	10
n-Nitroso-di-n-propylamine	BDL	10
2-Methylnaphthalene	BDL	10
2,4-Dichlorophenol	BDL	10
2,4-Dimethylphenol	BDL	10
2,4-Dinitrophenol	BDL	10
4-Chloroaniline	BDL	10
4-Chloro-3-methylphenol	BDL	10
Hexachlorobutadiene	BDL	10
Hexachlorocyclopentadiene	BDL	10
2,4,5-Trichlorophenol	BDL	10
2,4,6-Trichlorophenol	BDL	10
2-Nitroaniline	BDL	10
3-Nitroaniline	BDL	10
4-Nitroaniline	BDL	10
2,4-Dinitrotoluene	BDL	10
2,6-Dinitrotoluene	BDL	10
4,6-Dinitro-2-methylphenol	BDL	10
n-Nitrosodimethylamine	BDL	10
n-Nitrosodiphenylamine	BDL	10
1,2-Diphenyl hydrazine	BDL	10
4-Bromophenyl-phenylether	BDL	10
Hexachlorobenzene	BDL	10
Hexachloroethane	BDL	10
Pentachlorophenol	BDL	10
Acenaphthylene	BDL	10
Acenaphthene	BDL	10
Phenanthrene	BDL	10
Anthracene	BDL	10
Fluoranthene	BDL	10
Pyrene	BDL	10
Chrysene	BDL	10

CONTINUED: 1 OF 2 PAGES

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB #: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

JOB #: 96012

SAMPLE IDENTITY: MW-2

CONTROL #: 17046

DATE SAMPLED: 05/23/96

DATE REC'D: 05/24/96

DATE ANALYZED: 06/06/96

DATE EXTRACTED: 05/30/96

MATRIX: LIQUID

PERCENT MOISTURE: N/A

COMPOUND	CONCENTRATION (UG/L)	DETECTION LIMIT MULTIPLIER: (UG/L) X 1
Benzo[a]anthracene	BDL	10
3,3'-Dichlorobenzidine	BDL	10
Butylbenzylphthalate	BDL	10
bis(2-Ethylhexyl)phthalate	BDL	10
Di-n-butylphthalate	BDL	10
Di-n-octylphthalate	BDL	10
Dimethylphthalate	BDL	10
Diethylphthalate	BDL	10
Fluorene	BDL	10
2-Methylphenol	BDL	10
4-Methylphenol	BDL	10
2-Nitrophenol	BDL	10
4-Nitrophenol	BDL	10
Phenol	BDL	10
Isophorone	BDL	10
Benzidine	BDL	10
Azobenzene	BDL	10
Nitrobenzene	BDL	10
1,2,4-Trichlorobenzene	BDL	10
Dibenzofuran	BDL	10
Benzo[b]fluoranthene	BDL	10
Benzo[k]fluoranthene	BDL	10
Benzo[a]pyrene	BDL	10
Indeno[1,2,3-cd]pyrene	BDL	10
Dibenzo[a,h]anthracene	BDL	10
Benzo[g,h,i]perylene	BDL	10
Benzoic acid	BDL	50
Benzyl Alcohol	BDL	50

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-FLUOROPHENOL	42%	33-117%
PHENOL-D5	29%	29-113%
NITROBENZENE-D5	57%	36-120%
2-FLUOROBIPHENYL	45%	38-115%
2,4,6-TRIBROMOPHENOL	55%	19-109%
TERPHENYL-D14	66%	45-131%

BDL = BELOW DETECTION LIMIT
ANALYZED BY: WN



**VOLATILE ORGANIC ANALYSIS
EPA METHOD 8020**

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-3

CONTROL#: 17046

DATE SAMPLED: 05/23/96

DATE REC'D: 05/24/96

DATE ANALYZED: 06/04/96

MATRIX: LIQUID

PERCENT MOISTURE: N/A

COMPOUND

**CONCENTRATION
(UG/L)**

**DETECTION LIMIT MULTIPLIER:
(UG/L) X 1**

BENZENE

BDL

1

METHYL-TERTIARY-BUTYL ETHER

BDL

1

TOLUENE

BDL

1

ETHYLBENZENE

BDL

1

TOTAL XYLENES

BDL

1

BDL=BELOW DETECTION LIMIT

ANALYZED BY: DM



SEMIVOLATILE ORGANIC ANALYSIS
EPA METHOD 8270

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-3

CONTROL#: 17046

DATE SAMPLED: 05/23/96

DATE REC'D: 05/24/96

DATE ANALYZED: 06/06/96

DATE EXTRACTED: 05/30/96

MATRIX: LIQUID

PERCENT MOISTURE: N/A

COMPOUND

CONCENTRATION

DETECTION LIMIT MULTIPLIER:

(UG/L)

(UG/L) X 3

2-Chlorophenol	BDL	10
2-Chloronaphthalene	BDL	10
4-Chlorophenyl-phenyl-ether	BDL	10
1,4-Dichlorobenzene	BDL	10
1,3-Dichlorobenzene	BDL	10
1,2-Dichlorobenzene	BDL	10
bis(2-chloroethoxy)methane	BDL	10
bis(2-chloroisopropyl)ether	BDL	10
bis(2-chloroethyl)ether	BDL	10
n-Nitroso-di-n-propylamine	BDL	10
2-Methylnaphthalene	BDL	10
2,4-Dichlorophenol	BDL	10
2,4-Dimethylphenol	BDL	10
2,4-Dinitrophenol	BDL	10
4-Chloroaniline	BDL	10
4-Chloro-3-methylphenol	BDL	10
Hexachlorobutadiene	BDL	10
Hexachlorocyclopentadiene	BDL	10
2,4,5-Trichlorophenol	BDL	10
2,4,6-Trichlorophenol	BDL	10
2-Nitroaniline	BDL	10
3-Nitroaniline	BDL	10
4-Nitroaniline	BDL	10
2,4-Dinitrotoluene	BDL	10
2,6-Dinitrotoluene	BDL	10
4,6-Dinitro-2-methylphenol	BDL	10
n-Nitrosodimethylamine	BDL	10
n-Nitrosodiphenylamine	BDL	10
1,2-Diphenyl hydrazine	BDL	10
4-Bromophenyl-phenylether	BDL	10
Hexachlorobenzene	BDL	10
Hexachloroethane	BDL	10
Pentachlorophenol	BDL	10
Acenaphthylene	BDL	10
Acenaphthene	BDL	10
Phenanthrene	BDL	10
Anthracene	BDL	10
Fluoranthene	BDL	10
Pyrene	BDL	10
Chrysene	BDL	10

CONTINUED: 1 OF 2 PAGES

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-3

CONTROL#: 17046

DATE SAMPLED: 05/23/96

DATE REC'D: 05/24/96

DATE ANALYZED: 06/06/96

DATE EXTRACTED: 05/30/96

MATRIX: LIQUID

PERCENT MOISTURE: N/A

COMPOUND

CONCENTRATION

DETECTION LIMIT MULTIPLIER:

(UG/L)

(UG/L) X 3

Benzo[a]anthracene	BDL	10
3,3'-Dichlorobenzidine	BDL	10
Butylbenzylphthalate	BDL	10
bis(2-Ethylhexyl)phthalate	BDL	10
Di-n-butylphthalate	BDL	10
Di-n-octylphthalate	BDL	10
Dimethylphthalate	BDL	10
Diethylphthalate	BDL	10
Fluorene	BDL	10
2-Methylphenol	BDL	10
4-Methylphenol	BDL	10
2-Nitrophenol	BDL	10
4-Nitrophenol	BDL	10
Phenol	BDL	10
Isophorone	BDL	10
Benzidine	BDL	10
Azobenzene	BDL	10
Nitrobenzene	BDL	10
1,2,4-Trichlorobenzene	BDL	10
Dibenzofuran	BDL	10
Benzo[b]fluoranthene	BDL	10
Benzo[k]fluoranthene	BDL	10
Benzo[a]pyrene	BDL	10
Indeno[1,2,3-cd]pyrene	BDL	10
Dibenzo[a,h]anthracene	BDL	10
Benzo[g,h,i]perylene	BDL	10
Benzoic acid	BDL	50
Benzyl Alcohol	BDL	50

SURROGATE

PERCENT RECOVERY

ACCEPTANCE LIMITS

2-FLUOROPHENOL	58%	33-117%
PHENOL-D5	55%	29-113%
NITROBENZENE-D5	58%	36-120%
2-FLUOROBIPHENYL	47%	38-115%
2,4,6-TRIBROMOPHENOL	44%	19-109%
TERPHENYL-D14	65%	45-131%

BDL=BELOW DETECTION LIMIT
ANALYZED BY: WN

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-4

CONTROL#: 17046

DATE SAMPLED: 05/23/96

DATE REC'D: 05/24/96

DATE ANALYZED: 06/06/96

DATE EXTRACTED: 05/30/96

MATRIX: LIQUID

PERCENT MOISTURE: N/A

COMPOUND

CONCENTRATION

DETECTION LIMIT MULTIPLIER:

(UG/L)

(UG/L) X 1

2-Chlorophenol	BDL	10
2-Chloronaphthalene	BDL	10
4-Chlorophenyl-phenyl-ether	BDL	10
1,4-Dichlorobenzene	BDL	10
1,3-Dichlorobenzene	BDL	10
1,2-Dichlorobenzene	BDL	10
bis(2-chloroethoxy)methane	BDL	10
bis(2-chloroisopropyl)ether	BDL	10
bis(2-chloroethyl)ether	BDL	10
n-Nitroso-di-n-propylamine	BDL	10
2-Methylnaphthalene	BDL	10
2,4-Dichlorophenol	BDL	10
2,4-Dimethylphenol	BDL	10
2,4-Dinitrophenol	BDL	10
4-Chloroaniline	BDL	10
4-Chloro-3-methylphenol	BDL	10
Hexachlorobutadiene	BDL	10
Hexachlorocyclopentadiene	BDL	10
2,4,5-Trichlorophenol	BDL	10
2,4,6-Trichlorophenol	BDL	10
2-Nitroaniline	BDL	10
3-Nitroaniline	BDL	10
4-Nitroaniline	BDL	10
2,4-Dinitrotoluene	BDL	10
2,6-Dinitrotoluene	BDL	10
4,6-Dinitro-2-methylphenol	BDL	10
n-Nitrosodimethylamine	BDL	10
n-Nitrosodiphenylamine	BDL	10
1,2-Diphenyl hydrazine	BDL	10
4-Bromophenyl-phenylether	BDL	10
Hexachlorobenzene	BDL	10
Hexachloroethane	BDL	10
Pentachlorophenol	BDL	10
Acenaphthylene	BDL	10
Acenaphthene	BDL	10
Phenanthrene	BDL	10
Anthracene	BDL	10
Fluoranthene	BDL	10
Pyrene	BDL	10
Chrysene	BDL	10

CONTINUED: 1 OF 2 PAGES

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-4

CONTROL#: 17046

DATE SAMPLED: 05/23/96

DATE REC'D: 05/24/96

DATE ANALYZED: 06/06/96

DATE EXTRACTED: 05/30/96

MATRIX: LIQUID

PERCENT MOISTURE: N/A

COMPOUND

CONCENTRATION

DETECTION LIMIT MULTIPLIER:

(UG/L)

(UG/L) X 1

Benzo[a]anthracene	BDL	10
3,3'-Dichlorobenzidine	BDL	10
Butylbenzylphthalate	BDL	10
bis(2-Ethylhexyl)phthalate	BDL	10
Di-n-butylphthalate	BDL	10
Di-n-octylphthalate	BDL	10
Dimethylphthalate	BDL	10
Diethylphthalate	BDL	10
Fluorene	BDL	10
2-Methylphenol	BDL	10
4-Methylphenol	BDL	10
2-Nitrophenol	BDL	10
4-Nitrophenol	BDL	10
Phenol	BDL	10
Isophorone	BDL	10
Benzidine	BDL	10
Azobenzene	BDL	10
Nitrobenzene	BDL	10
1,2,4-Trichlorobenzene	BDL	10
Dibenzofuran	BDL	10
Benzo[b]fluoranthene	BDL	10
Benzo[k]fluoranthene	BDL	10
Benzo[a]pyrene	BDL	10
Indeno[1,2,3-cd]pyrene	BDL	10
Dibenzo[a,h]anthracene	BDL	10
Benzo[g,h,i]perylene	BDL	10
Benzoic acid	BDL	50
Benzyl Alcohol	BDL	50

SURROGATE

PERCENT RECOVERY

ACCEPTANCE LIMITS

2-FLUOROPHENOL	43%	33-117%
PHENOL-D5	29%	29-113%
NITROBENZENE-D5	57%	36-120%
2-FLUOROBIPHENYL	50%	38-115%
2,4,6-TRIBROMOPHENOL	48%	19-109%
TERPHENYL-D14	68%	45-131%

BDL=BELOW DETECTION LIMIT
ANALYZED BY: WN

**VOLATILE ORGANIC ANALYSIS
EPA METHOD 8020**

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-5

CONTROL#: 17046

DATE SAMPLED: 05/23/96

DATE REC'D: 05/24/96

DATE ANALYZED: 06/04/96

MATRIX: LIQUID

PERCENT MOISTURE: N/A

COMPOUND

CONCENTRATION

DETECTION LIMIT MULTIPLIER:

(UG/L)

(UG/L) X 1

BENZENE

BDL

1

METHYL-TERTIARY-BUTYL ETHER

BDL

1

TOLUENE

BDL

1

ETHYLBENZENE

BDL

1

TOTAL XYLENES

BDL

1

BDL=BELOW DETECTION LIMIT

ANALYZED BY: DM

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB #: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

JOB #: 96012

SAMPLE IDENTITY: MW-5

CONTROL #: 17046

DATE SAMPLED: 05/23/96

DATE REC'D: 05/24/96

DATE ANALYZED: 06/06/96

DATE EXTRACTED: 05/30/96

MATRIX: LIQUID

PERCENT MOISTURE: N/A

COMPOUND

CONCENTRATION
(UG/L)

DETECTION LIMIT MULTIPLIER:
(UG/L) X 3

2-Chlorophenol	BDL	10
2-Chloronaphthalene	BDL	10
4-Chlorophenyl-phenyl-ether	BDL	10
1,4-Dichlorobenzene	BDL	10
1,3-Dichlorobenzene	BDL	10
1,2-Dichlorobenzene	BDL	10
bis(2-chloroethoxy)methane	BDL	10
bis(2-chloroisopropyl)ether	BDL	10
bis(2-chloroethyl)ether	BDL	10
n-Nitroso-di-n-propylamine	BDL	10
2-Methylnaphthalene	BDL	10
2,4-Dichlorophenol	BDL	10
2,4-Dimethylphenol	BDL	10
2,4-Dinitrophenol	BDL	10
4-Chloroaniline	BDL	10
4-Chloro-3-methylphenol	BDL	10
Hexachlorobutadiene	BDL	10
Hexachlorocyclopentadiene	BDL	10
2,4,5-Trichlorophenol	BDL	10
2,4,6-Trichlorophenol	BDL	10
2-Nitroaniline	BDL	10
3-Nitroaniline	BDL	10
4-Nitroaniline	BDL	10
2,4-Dinitrotoluene	BDL	10
2,6-Dinitrotoluene	BDL	10
4,6-Dinitro-2-methylphenol	BDL	10
n-Nitrosodimethylamine	BDL	10
n-Nitrosodiphenylamine	BDL	10
1,2-Diphenyl hydrazine	BDL	10
4-Bromophenyl-phenylether	BDL	10
Hexachlorobenzene	BDL	10
Hexachloroethane	BDL	10
Pentachlorophenol	BDL	10
Acenaphthylene	BDL	10
Acenaphthene	BDL	10
Phenanthrene	BDL	10
Anthracene	BDL	10
Fluoranthene	BDL	10
Pyrene	BDL	10
Chrysene	BDL	10

CONTINUED: 1 OF 2 PAGES

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-5

CONTROL#: 17046

DATE SAMPLED: 05/23/96

DATE REC'D: 05/24/96

DATE ANALYZED: 06/06/96

DATE EXTRACTED: 05/30/96

MATRIX: LIQUID

PERCENT MOISTURE: N/A

COMPOUND	CONCENTRATION (UG/L)	DETECTION LIMIT MULTIPLIER: (UG/L) X 3
Benzo[a]anthracene	BDL	10
3,3'-Dichlorobenzidine	BDL	10
Butylbenzylphthalate	BDL	10
bis(2-Ethylhexyl)phthalate	BDL	10
Di-n-butylphthalate	BDL	10
Di-n-octylphthalate	BDL	10
Dimethylphthalate	BDL	10
Diethylphthalate	BDL	10
Fluorene	BDL	10
2-Methylphenol	BDL	10
4-Methylphenol	BDL	10
2-Nitrophenol	BDL	10
4-Nitrophenol	BDL	10
Phenol	BDL	10
Isophorone	BDL	10
Benzidine	BDL	10
Azobenzene	BDL	10
Nitrobenzene	BDL	10
1,2,4-Trichlorobenzene	BDL	10
Dibenzofuran	BDL	10
Benzo[b]fluoranthene	BDL	10
Benzo[k]fluoranthene	BDL	10
Benzo[a]pyrene	BDL	10
Indeno[1,2,3-cd]pyrene	BDL	10
Dibenzo[a,h]anthracene	BDL	10
Benzo[g,h,i]perylene	BDL	10
Benzoic acid	BDL	50
Benzyl Alcohol	BDL	50

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-FLUOROPHENOL	44%	33-117%
PHENOL-D5	40%	29-113%
NITROBENZENE-D5	43%	36-120%
2-FLUOROBIPHENYL	27%*	38-115%
2,4,6-TRIBROMOPHENOL	42%	19-109%
TERPHENYL-D14	64%	45-131%

* ONE ACID AND/OR ON BASE SURROGATE PER EXTRACT MAY BE
OUTSIDE THE LIMITS ACCORDING TO THE QC STANDARDS

BDL=BELOW DETECTION LIMIT

ANALYZED BY: WN



**VOLATILE ORGANIC ANALYSIS
EPA METHOD 8020**

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-6

CONTROL#: 17046

DATE SAMPLED: 05/23/96

DATE REC'D: 05/24/96

DATE ANALYZED: 06/04/96

MATRIX: LIQUID

PERCENT MOISTURE: N/A

COMPOUND

**CONCENTRATION
(UG/L)**

**DETECTION LIMIT MULTIPLIER:
(UG/L) X 1**

BENZENE

2

1

METHYL-TERTIARY-BUTYL ETHER

BDL

1

TOLUENE

BDL

1

ETHYLBENZENE

BDL

1

TOTAL XYLENES

BDL

1

BDL= BELOW DETECTION LIMIT

ANALYZED BY: DM

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-6

CONTROL#: 17046

DATE SAMPLED: 05/23/96

DATE REC'D: 05/24/96

DATE ANALYZED: 06/06/96

DATE EXTRACTED: 05/30/96

MATRIX: LIQUID

PERCENT MOISTURE: N/A

COMPOUND

CONCENTRATION

DETECTION LIMIT MULTIPLIER:

(UG/L)

(UG/L) X 4

2-Chlorophenol	BDL	10
2-Chloronaphthalene	BDL	10
4-Chlorophenyl-phenyl-ether	BDL	10
1,4-Dichlorobenzene	BDL	10
1,3-Dichlorobenzene	BDL	10
1,2-Dichlorobenzene	BDL	10
bis(2-chloroethoxy)methane	BDL	10
bis(2-chloroisopropyl)ether	BDL	10
bis(2-chloroethyl)ether	BDL	10
n-Nitroso-di-n-propylamine	BDL	10
2-Methylnaphthalene	BDL	10
2,4-Dichlorophenol	BDL	10
2,4-Dimethylphenol	BDL	10
2,4-Dinitrophenol	BDL	10
4-Chloroaniline	BDL	10
4-Chloro-3-methylphenol	BDL	10
Hexachlorobutadiene	BDL	10
Hexachlorocyclopentadiene	BDL	10
2,4,5-Trichlorophenol	BDL	10
2,4,6-Trichlorophenol	BDL	10
2-Nitroaniline	BDL	10
3-Nitroaniline	BDL	10
4-Nitroaniline	BDL	10
2,4-Dinitrotoluene	BDL	10
2,6-Dinitrotoluene	BDL	10
4,6-Dinitro-2-methylphenol	BDL	10
n-Nitrosodimethylamine	BDL	10
n-Nitrosodiphenylamine	BDL	10
1,2-Diphenyl hydrazine	BDL	10
4-Bromophenyl-phenylether	BDL	10
Hexachlorobenzene	BDL	10
Hexachloroethane	BDL	10
Pentachlorophenol	BDL	10
Acenaphthylene	BDL	10
Acenaphthene	BDL	10
Phenanthrene	BDL	10
Anthracene	BDL	10
Fluoranthene	BDL	10
Pyrene	BDL	10
Chrysene	BDL	10

CONTINUED: 1 OF 2 PAGES

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-6

CONTROL#: 17046

DATE SAMPLED: 05/23/96

DATE REC'D: 05/24/96

DATE ANALYZED: 06/06/96

DATE EXTRACTED: 05/30/96

MATRIX: LIQUID

PERCENT MOISTURE: N/A

COMPOUND	CONCENTRATION (UG/L)	DETECTION LIMIT MULTIPLIER: (UG/L) X 4
Benzo[a]anthracene	BDL	10
3,3'-Dichlorobenzidine	BDL	10
Butylbenzylphthalate	BDL	10
bis(2-Ethylhexyl)phthalate	BDL	10
Di-n-butylphthalate	BDL	10
Di-n-octylphthalate	BDL	10
Dimethylphthalate	BDL	10
Diethylphthalate	BDL	10
Fluorene	BDL	10
2-Methylphenol	BDL	10
4-Methylphenol	BDL	10
2-Nitrophenol	BDL	10
4-Nitrophenol	BDL	10
Phenol	BDL	10
Isophorone	BDL	10
Benzidine	BDL	10
Azobenzene	BDL	10
Nitrobenzene	BDL	10
1,2,4-Trichlorobenzene	BDL	10
Dibenzofuran	BDL	10
Benzo[b]fluoranthene	BDL	10
Benzo[k]fluoranthene	BDL	10
Benzo[a]pyrene	BDL	10
Indeno[1,2,3-cd]pyrene	BDL	10
Dibenzo[a,h]anthracene	BDL	10
Benzo[g,h,i]perylene	BDL	10
Benzoic acid	BDL	50
Benzyl Alcohol	BDL	50

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-FLUOROPHENOL	64%	33-117%
PHENOL-D5	57%	29-113%
NITROBENZENE-D5	47%	36-120%
2-FLUOROBIPHENYL	29%*	38-115%
2,4,6-TRIBROMOPHENOL	19%	19-109%
TERPHENYL-D14	58%	45-131%

* ONE ACID AND/OR ON BASE SURROGATE PER EXTRACT MAY BE
OUTSIDE THE LIMITS ACCORDING TO THE QC STANDARDS

BDL=BELOW DETECTION LIMIT

ANALYZED BY: WN



TWIN STATE ENVIRONMENTAL CORP.

LABORATORY # : E24-96-09

JOB NAME : ALLEN LUMBER

CONTROL # : 17046

JOB # : 96-012

DATE SAMPLED : 05/23/96

LOCATION : ST. ALBANS, VT

QUALITY CONTROL STATEMENT

All samples analyzed by Chemserve are subject to quality standards. These standards are either as stringent or more stringent than those established under 40 CFR Part 136, state certification programs, and corresponding methodologies. Chemserve has a written QA/QC Procedures Manual which outlines these standards, and is available, upon request, for your reference. Written reports and validation summaries comply with established quality guidelines with the exception of any deviations already noted within the report.

Certification:

I certify that I have reviewed the above referenced analytical data and written report, and I have found this report within compliance with the procedures outlined in the Chemserve QA/QC Procedures Manual.

Certified by:

A handwritten signature in cursive script, reading "Linda Carleton-Henderson".

Linda Carleton-Henderson - QA/QC Administrator

SPIKE RECOVERY FORM
EPA METHOD 8020

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

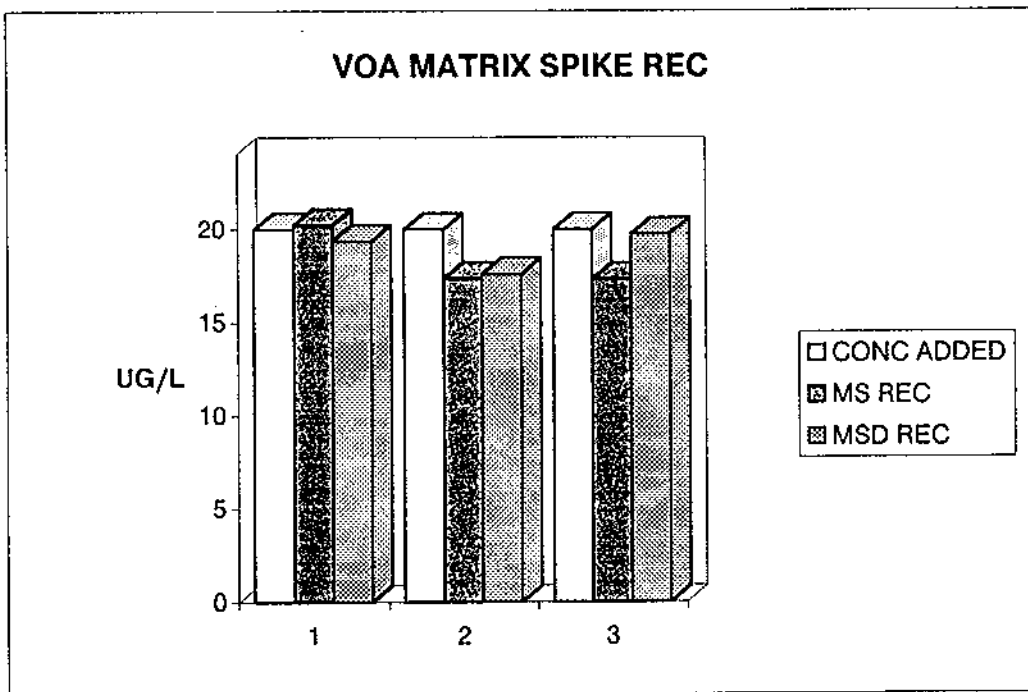
JOB#: 96012

SAMPLE IDENTITY: QC SPIKES / 17046

CONTROL#: 17046

DATE ANALYZED: 06/04/96

COMPOUND	CONC ADDED (UG/L)	AMT REC (UG/L)	DUP AMT REC (UG/L)	%REC	DUP % REC	%DIFF
BENZENE	20	20.24	19.34	101%	97%	5%
TOLUENE	20	17.34	17.58	87%	88%	1%
CHLOROBENZENE	20	17.29	19.73	86%	99%	12%





VOLATILE ORGANIC ANALYSIS
EPA METHOD 8020

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

JOB#: 96012

SAMPLE IDENTITY: MW-4

CONTROL#: 17046

DATE SAMPLED: 05/23/96

DATE REC'D: 05/24/96

DATE ANALYZED: 06/04/96

MATRIX: LIQUID

PERCENT MOISTURE: N/A

COMPOUND	CONCENTRATION (UG/L)	DETECTION LIMIT MULTIPLIER: (UG/L) X 1
BENZENE	BDL	1
METHYL-TERTIARY-BUTYL ETHER	BDL	1
TOLUENE	BDL	1
ETHYLBENZENE	BDL	1
TOTAL XYLENES	BDL	1

BDL=BELOW DETECTION LIMIT

ANALYZED BY: DM

**SEMIVOLATILE ORGANIC ANALYSIS
EPA METHOD 8270**

CUSTOMER: TWIN STATE ENVIRONMENTAL CORP.

LAB#: E24-96-09

SAMPLE LOCATION: ALLEN LUMBER ST. ALBANS, VT

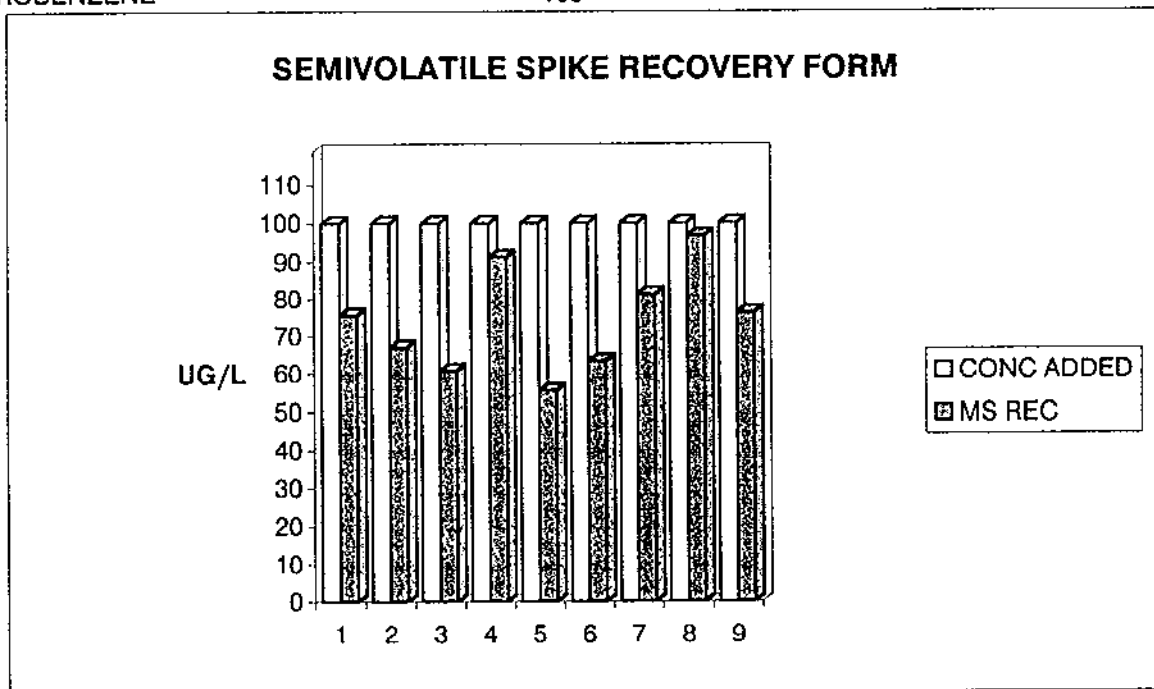
JOB#: 96012

SAMPLE IDENTITY: QC SPIKE

CONTROL#: 17046

DATE ANALYZED: 06/06/96

COMPOUND	CONC ADDED (UG/L)	AMT REC (UG/L)	%RECOVERY
PHENOL	100	75.58	76%
2-CHLOROPHENOL	100	67.00	67%
1,4-DICHLOROBENZENE	100	60.74	61%
4-CHLORO-3-METHYLPHENOL	100	91.22	91%
NITROBENZENE	100	55.52	56%
4-NITROPHENOL	100	63.33	63%
2,4-DINITROTOLUENE	100	81.11	81%
HEXACHLOROBUTADIENE	100	96.63	97%
HEXACHLOROBENZENE	100	76.18	76%



SPIKE RECOVERY LIMITS

PHENOL 26-100%
 2-CHLOROPHENOL 25-102%
 1,4-DICHLOROBENZENE 28-104%
 4-CHLORO-3-METHYLPHENOL 26-103%
 NITROBENZENE 40-120%
 4-NITROPHENOL 11-114%
 2,4-DINITROTOLUENE 28-104%
 HEXACHLOROBUTADIENE 40-120%
 HEXACHLOROBENZENE 40-120%

E24-96 09

6/10/96

CONTROL NO. 17046



317 Elm Street
Milford, NH 03055
(603) 673-5440
FAX (603) 673-0366

CHAIN OF CUSTODY

A CUSTOMER INFORMATION

CUSTOMER: TWIN STATE ENVIRONMENTAL
ADDRESS: 12 Huntington Rd Richmond VT 05477
TELEPHONE: (802) 934-3350
CONTACT PERSON: Chris Corcoran
P.O. NUMBER: _____

B PROJECT INFORMATION

JOB NAME: Alton Lumber
JOB NUMBER: 96012
LOCATION: ST. ALBANS VT
TELEPHONE: _____
CONTACT PERSON: (PRINT) _____

C SAMPLE INFORMATION

TURNAROUND TIME: (CIRCLE ONE)

STANDARD

RUSH

RUSH T.A.T. _____ (Check with lab)

D E F G H I J

STATION #	SAMPLE IDENTIFICATION & LOCATION	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE GRAB COMP	MATRIX SOLID (S) LIQUID (L) COMBINED (C) HAZARD (H)	# OF CONTAINERS
	MW-1	5/23/96	13:45	✓	L	3
	MW-2		13:55	✓	L	3
	MW-3		14:05	✓	L	3
	MW-4		14:10	✓	L	3
	MW-5		14:20	✓	L	3
	MW-6		14:30	✓	L	3

K CONTAINER & PRESERVATIVE										L ANALYSIS									
40001 6029 4/11/96 1470 Amber 150										Job No. on VIALS - 9601 Job No. on COC is Correct Form 5/23/96									
										8020 - MT BE 8020									
										↓									

M

CUSTODY

(PRINT NAME) SAMPLER: <u>Brian Wagner</u>	SIGNATURE: <u>[Signature]</u>	MILITARY DATE/TIME: <u>5/23/96 15:45</u>
RELINQUISHED:		MILITARY DATE/TIME:
RECEIVED:		MILITARY DATE/TIME:
RELINQUISHED:		MILITARY DATE/TIME:
RECEIVED FOR LABORATORY:	<u>[Signature]</u>	MILITARY DATE/TIME: <u>5-24-96 14:00</u>

LAB USE ONLY

A
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I
J
K
L
M

The State of New Hampshire
Department of Environmental Services

CERTIFICATE OF APPROVAL
Wastewater Analysis

Issued to
Chemsolve, Inc.

Located at
Elm Street, Milford, NH

Under the provisions of the Regulations in Env-C300
for the following analyses:

FULL CERTIFICATION: Total Coliform by Membrane Filtration, Fecal Coliform by Membrane Filtration, ICP Metals, Metals by Graphite Furnace, Mercury, pH, TDS, Total Hardness, Calcium, Magnesium, Sodium, Potassium, Total Alkalinity, Fluoride, Sulfate, Ammonia, Nitrate-N, Orthophosphate, TKN, Total Phosphorus, COD, BOD, Non-Filterable Residue, Oil & Grease, Total Phenolics, PCBs in Water, PCBs in Oil, Pesticides, and Volatile Organics.

PROVISIONAL CERTIFICATION: None

REPLACES CERTIFICATE #100895-B

CERTIFICATE NUMBER: 100895-D

DATE OF ISSUE: May 23, 1996

EXPIRATION DATE: December 2, 1996

Charles M. Meyer
Certifying Officer

The State of New Hampshire
Department of Environmental Services

CERTIFICATE OF APPROVAL
Drinking Water Analysis

Issued to
Chemsolve, Inc.

Located at
Elm Street, Milford, NH

Under the provisions of the Regulations in Env-C300
for the following analyses:

FULL CERTIFICATION: Total Coliform by Membrane Filtration, Fecal Coliform by Membrane Filtration, Coli-ert-MPN, Metals by Graphite Furnace, Metals by ICP, Mercury, Nitrate-N, Fluoride, Nitrite-N, Turbidity, Total Filterable Residue, Calcium, pH, Alkalinity, Corrosivity, Sodium, Sulfate, Trihalomethanes, Volatile Organics, Vinyl Chloride, and EDB.

PROVISIONAL CERTIFICATION: Total Cyanide

REPLACES CERTIFICATE #100895-A

CERTIFICATE NUMBER: 100895-C

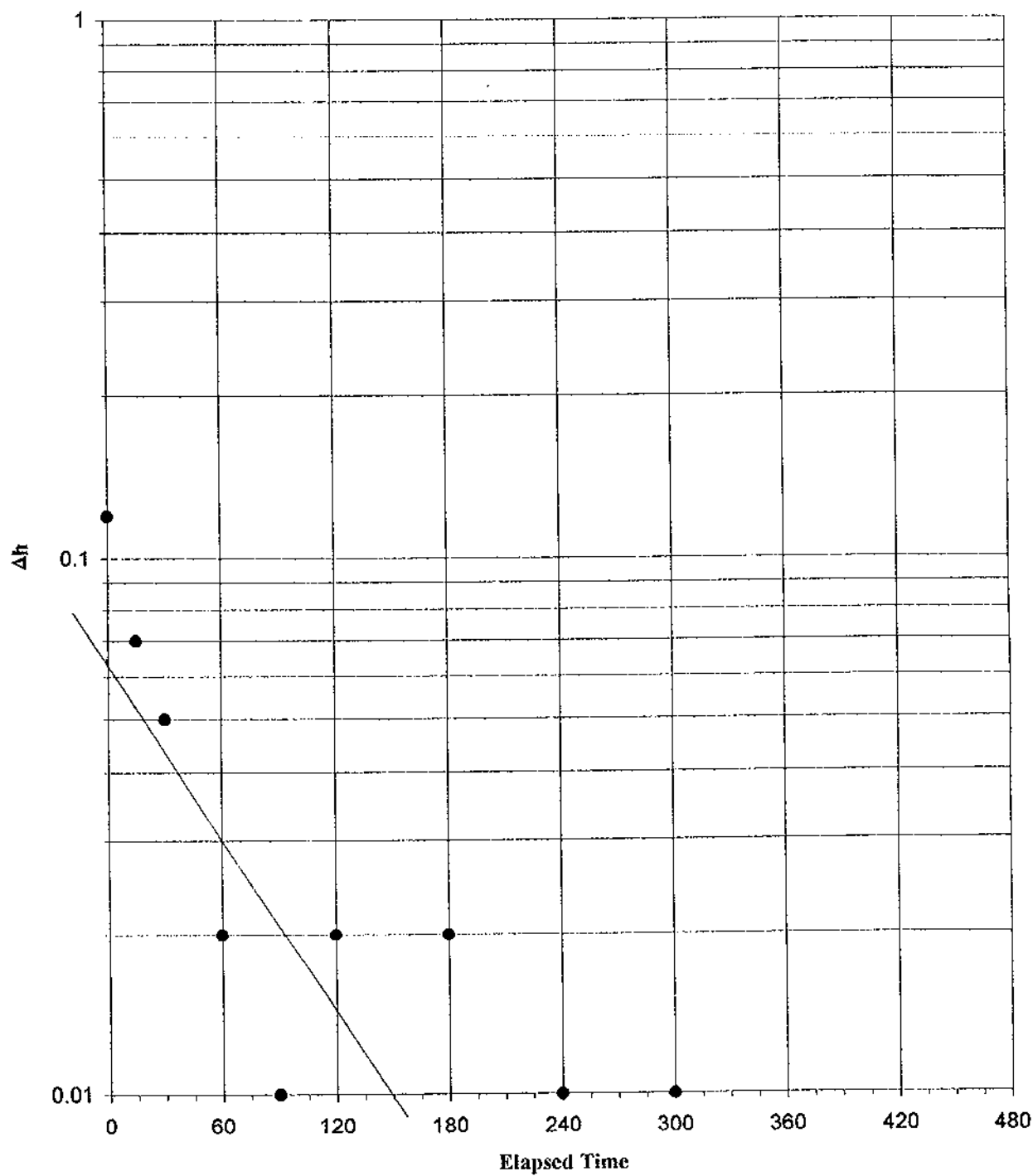
DATE OF ISSUE: December 19, 1995

EXPIRATION DATE: December 2, 1996

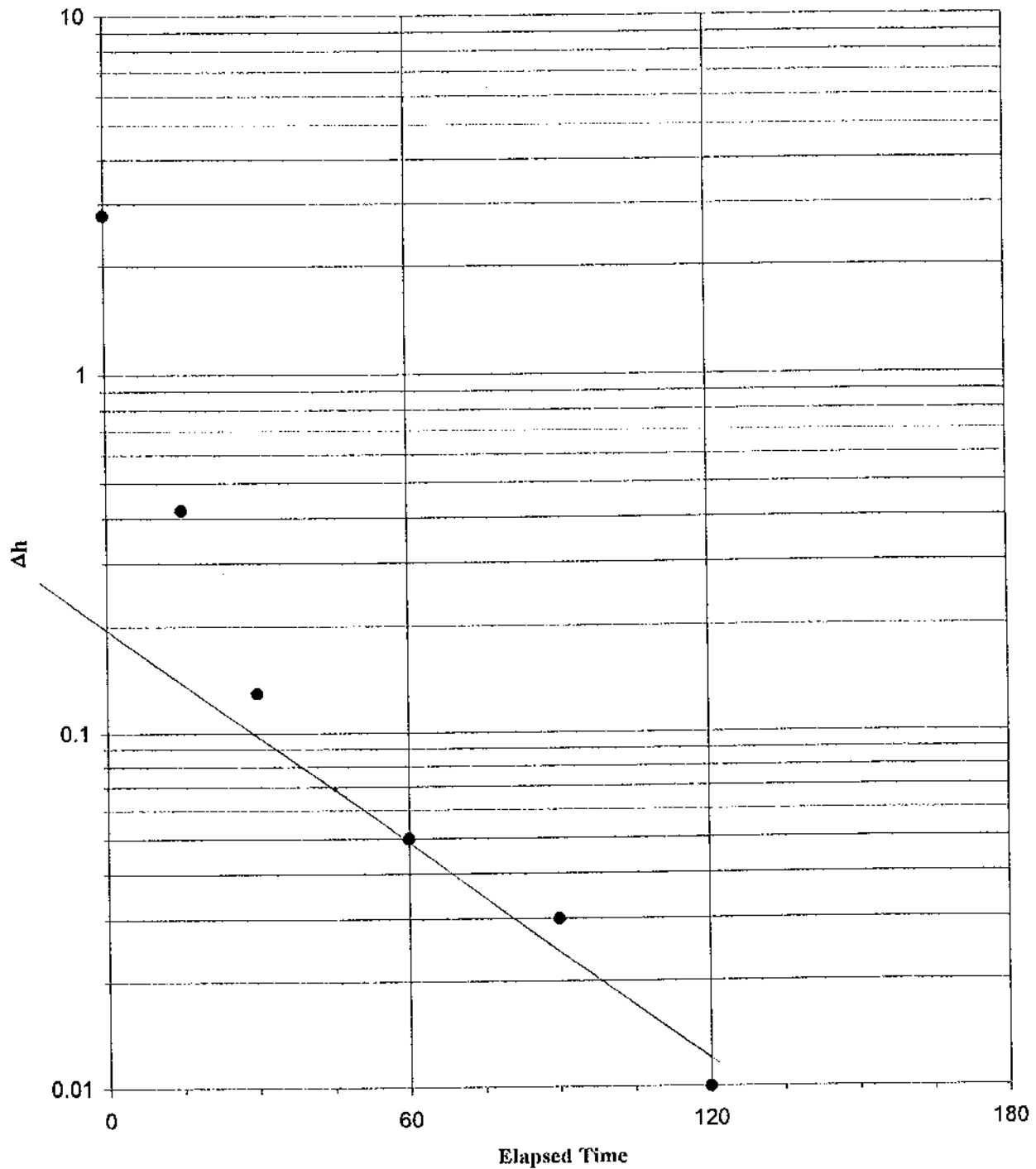
Charles M. Meyer
Certifying Officer

APPENDIX D

ALLEN LUMBER
ST. ALBANS, VERMONT
SUPPLEMENTAL REMEDIAL INVESTIGATION
SLUG TEST, WELL GPMW-1
MAY 26, 1996



ALLEN LUMBER
ST. ALBANS, VERMONT
SUPPLEMENTAL REMEDIAL INVESTIGATION
SLUG TEST, WELL GPMW-3
MAY 26, 1996



WELL MW-1 Falling Head Test 5/2/96

D = 3.63 feet

H = 3.63 feet

L = 3.63 feet

rce = .0692898 feet

rw = .083 feet

re = 1.479259 feet

yo = .065 feet

yt = .03 feet

t = 60 seconds

K = 2.454698E-05 feet/sec

K = 15.86403 gal/day/ft²

K = 2.120859 feet/day

K = 7.48192E-04 cm/sec

WELL MW-3 Falling Head Test 5/2/96

D = 4.85 feet

H = 4.85 feet

L = 4.85 feet

rce = .0692898 feet

rw = .083 feet

re = 1.857226 feet

yo = .155 feet

yt = .07 feet

t = 45 seconds

K = 2.717465E-05 feet/sec

K = 17.56221 gal/day/ft²

K = 2.34789 feet/day

K = 8.282833E-04 cm/sec

APPENDIX D

Calculated Groundwater and Contaminant Travel Time

Apparent Groundwater Flow Velocity:

$$V_{gw} = ki,$$

where k = hydraulic conductivity, i = hydraulic gradient, and V_{gw} = groundwater velocity.

$$V_{gw} = 2.15 \frac{\text{ft}}{\text{day}} \cdot 0.037 \frac{\text{ft}}{3} = 0.79 \frac{\text{ft}}{\text{d}}$$

For transport of contaminants, velocity equals groundwater velocity divided by a retardation factor.

Contaminant Transport Velocity:

$$V_{oc} = \frac{V_{gw}}{R},$$

where V_{oc} = contaminant velocity, and R = retardation factor, which equals;

$$R = 1 + \frac{K_d \rho_s}{n},$$

where K_d = soil/water distribution coefficient, ρ_s = soil bulk density, and n = effective porosity. K_d is found by the following:

$$K_d = K_{oc} * f_{oc},$$

where K_{oc} = carbon/water sorption coefficient, and f_{oc} = fraction of organic content in soil.

For all calculations, $\rho_s = 1.8 \text{ g/cm}^3$, $n = 0.32 \text{ cm}^3/\text{cm}^3$ soil, and $f_{oc} = 0.002 \text{ g/g}$

Using the above presented equations, the following values have been calculated for contaminant velocity:

Contaminant	K_{oc}	K_d	R	V_{oc}
Benzene	57	0.114	1.6	0.49
O-Xylenes	255	0.51	3.9	0.20
Naphthalene	964	1.93	11.9	0.07

Notes:

1. Default values obtained from "Tiered Approach to Cleanup Objective Guidance Document," Illinois Environmental Protection Agency 1996.
2. V_{oc} represents a rough estimate of travel times and does not include factors for decay rates.
3. Reference ASTM E1739-95 Standard Guide for Risk-Based Corrective Action - "Applied for Petroleum Release Sites."

APPENDIX E



317 Elm Street
Milford, N.H. 03055
(603) 673-5440
FAX (603) 673-0366

Date : 8-02-96 Time : 4:05 pm
From : Linda Fax # : (603) 673-0366
To : Brian Wagner Company: Twin State
Fax #: 802-434-4478 Phone #: 802-434-3350

Number of pages faxed (including cover letter): 7

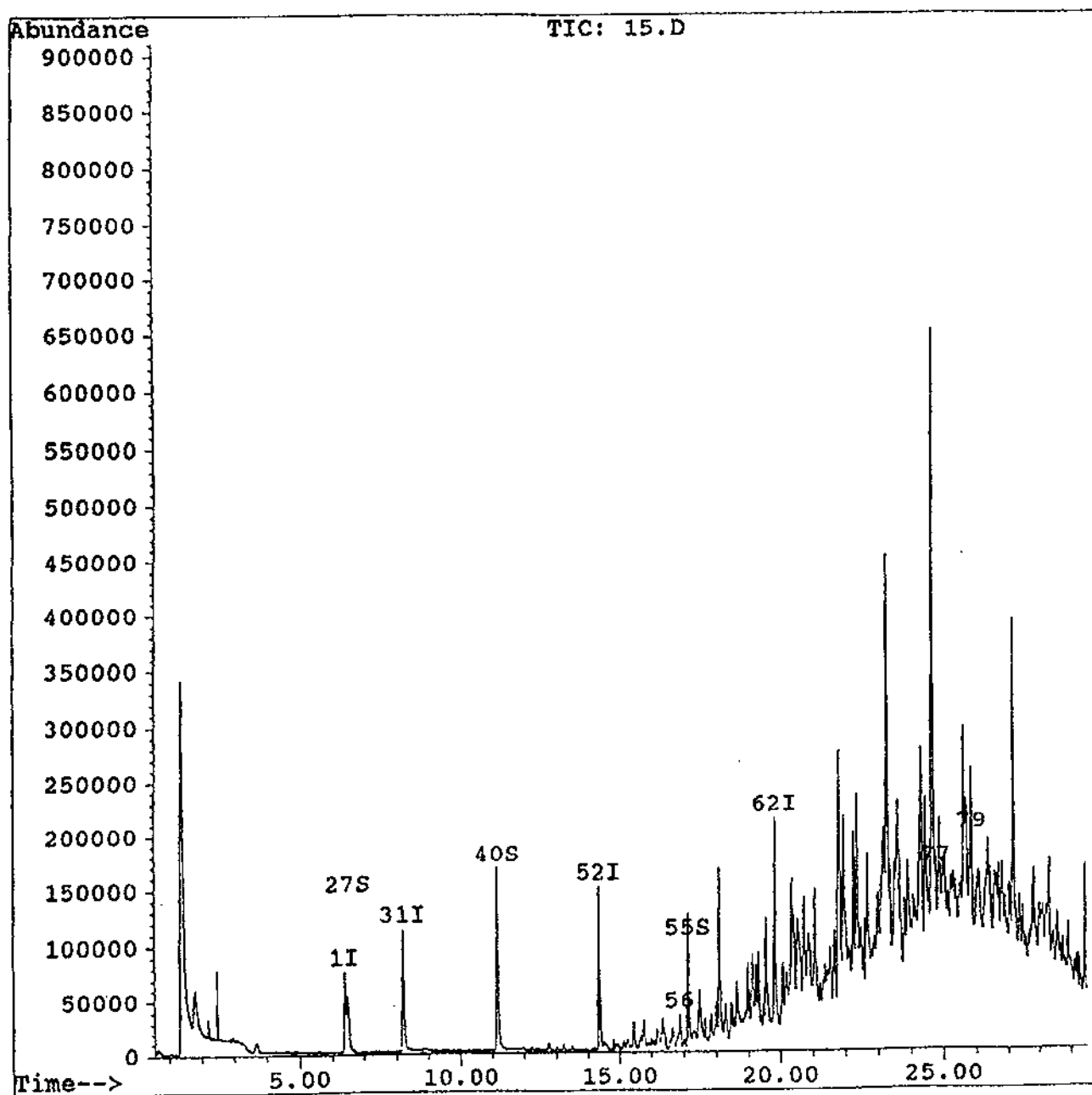
Remarks: If you need me to mail you copies as
well, than give me a call.

Linda

Data File : C:\HPCHEM\2\DATA\022296\15.D
Acq On : 22 Feb 96 5:32 pm
Sample : TSEC 14885-SB5 5ML
Misc :
Quant Time: Feb 22 18:03 1996

Vial: 15
Operator:
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\EVAL15.M
Title : METHOD 8260 CAPILLARY COLUMN
Last Update : Thu Feb 22 09:45:06 1996
Response via : Multiple Level Calibration



Data File : C:\HPCHEM\2\DATA\022296\15.D
 Acq On : 22 Feb 96 5:32 pm
 Sample : TSEC 14885-SB5 5ML
 Misc :
 Quant Time: Feb 22 18:03 1996

Vial: 15
 Operator:
 Inst : Instrumen
 Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\EVAL15.M
 Title : METHOD 8260 CAPILLARY COLUMN
 Last Update : Thu Feb 22 09:45:06 1996
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) pentafluorobenzene	6.41	168	132681	50.00	ug/l	-0.05
31) 1,4-difluorobenzene	8.20	114	191490	50.00	UG/L	-0.06
52) chlorobenzene-d5	14.36	54	45026	50.00	UG/L	-0.06
62) 1,4-dichlorobenzene-d4	19.83	152	90055	50.00	UG/L	-0.05
System Monitoring Compounds						
27) dibromofluoromethane	6.50	111	61501	52.24	ug/l	%Recovery 104.48%
40) toluene-d8	11.17	98	205270	49.93	UG/L	99.86%
55) 4-bromofluorobenzene	17.13	174	56170	52.24	UG/L	104.48%

Target Compounds			Qvalue
2) vinyl chloride	0.00	62	Not Detected
3) dichlorodifluoromethane	0.00	85	Not Detected
4) chloromethane	0.00	50	Not Detected
5) 1,1-dichloroethene	0.00	96	Not Detected
6) bromomethane	0.00	94	Not Detected
7) chloroethane	0.00	64	Not Detected
8) trichlorofluoromethane	0.00	101	Not Detected
9) Pentane	0.00	43	Not Detected
10) acrolein	0.00	56	Not Detected
11) acetone	0.00	43	Not Detected
12) 2-Methyl Pentane	0.00	43	Not Detected
13) carbon disulfide	0.00	76	Not Detected
14) trans-1,2-dichloroethene	0.00	96	Not Detected
15) methylene chloride	0.00	84	Not Detected
16) acrylonitrile	0.00	53	Not Detected
17) mtbe	0.00	73	Not Detected
18) cis-1,2-dichloroethene	0.00	96	Not Detected
19) 1,1-dichloroethane	0.00	63	Not Detected
20) mek	0.00	72	Not Detected
21) 1,1-dichloropropene	0.00	110	Not Detected
22) 2,2-dichloropropane	0.00	77	Not Detected
23) 1,2-dichloroethane	0.00	62	Not Detected
24) bromochloromethane	0.00	128	Not Detected
25) chloroform	0.00	83	Not Detected
26) 1,1,1-trichloroethane	0.00	97	Not Detected
28) 2,2,4-Trimethyl Pentane	0.00	57	Not Detected
29) carbon tetrachloride	0.00	119	Not Detected
30) benzene	0.00	78	Not Detected
32) trichloroethene	0.00	95	Not Detected
33) 1,2-dichloropropane	0.00	63	Not Detected
34) dibromomethane	0.00	93	Not Detected
35) bromodichloromethane	0.00	83	Not Detected
36) 2-chloroethyl vinyl ether	0.00	63	Not Detected
37) cis-1,3-dichloropropene	0.00	75	Not Detected
38) 4-methyl-2-pentanone	0.00	43	Not Detected
39) 1,3-dichloropropane	0.00	76	Not Detected
41) toluene	0.00	92	Not Detected

42)	trans-1,3-dichloropropene	0.00	75	Not Detected
43)	1,1,2-trichloroethane	0.00	83	Not Detected
44)	tetrachloroethene	0.00	166	Not Detected
45)	2-hexanone	0.00	43	Not Detected
46)	1,1,1,2-tetrachloroethane	0.00	131	Not Detected
47)	dibromochloromethane	0.00	129	Not Detected
48)	1,2-dibromoethane	0.00	107	Not Detected
49)	Nonane	0.00	43	Not Detected
50)	m+p-xylenes	0.00	106	Not Detected
51)	chlorobenzene	0.00	112	Not Detected
53)	o-xylene	0.00	106	Not Detected
54)	ethylbenzene	0.00	91	Not Detected
56)	1,1,2,2-tetrachloroethane	0.00	83	Not Detected
57)	1,2,3-trichloropropane	0.00	110	Not Detected
58)	styrene	0.00	104	Not Detected
59)	bromoform	0.00	173	Not Detected
60)	1,3,5-trimethylbenzene	0.00	105	Not Detected
61)	bromobenzene	0.00	156	Not Detected
63)	1,2-dichlorobenzene	0.00	146	Not Detected
64)	n-propylbenzene	0.00	91	Not Detected
65)	2-chlorotoluene	0.00	91	Not Detected
66)	4-chlorotoluene	0.00	91	Not Detected
67)	tert-butylbenzene	0.00	119	Not Detected
68)	isopropylbenzene	0.00	105	Not Detected
69)	1,2,4-trimethylbenzene	0.00	105	Not Detected
70)	1,2-dibromo-3-chloropropan	0.00	157	Not Detected
71)	sec-butylbenzene	0.00	105	Not Detected
72)	1,3-dichlorobenzene	0.00	146	Not Detected
73)	4-isopropyltoluene	0.00	119	Not Detected
74)	1,4-dichlorobenzene	0.00	146	Not Detected
75)	n-butylbenzene	0.00	91	Not Detected
76)	naphthalene	0.00	128	Not Detected
77)	1,2,4-trichlorobenzene	0.00	180	Not Detected
78)	hexachlorobutadiene	0.00	225	Not Detected
79)	1,2,3-trichlorobenzene	0.00	180	Not Detected

Data File : C:\HPCHEM\2\DATA\022296\14.D

Acq On : 22 Feb 96 4:53 pm

Sample : TSEC 14885-SB3 5ML

Misc :

Quant Time: Feb 22 17:24 1996

Vial: 14

Operator:

Inst : Instrume

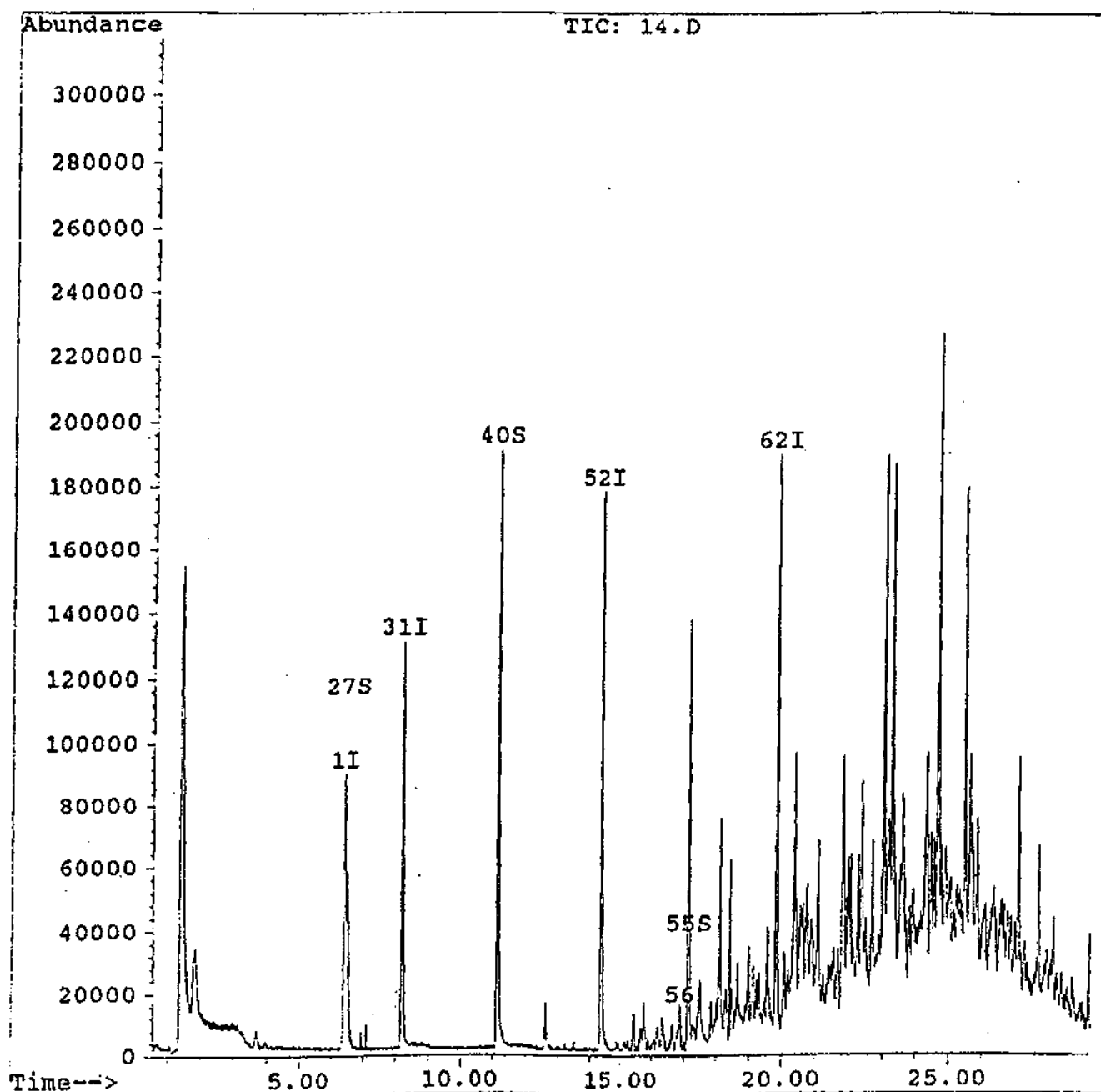
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\EVAL15.M

Title : METHOD 8260 CAPILLARY COLUMN

Last Update : Thu Feb 22 09:45:06 1996

Response via : Multiple Level Calibration



Data File : C:\HPCHEM\2\DATA\022296\14.D
 Acq On : 22 Feb 96 4:53 pm
 Sample : TSEC 14885-SB3 5ML
 Misc :
 Quant Time: Feb 22 17:24 1996

Vial: 14
 Operator:
 Inst : Instrumen
 Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\EVAL15.M
 Title : METHOD 8260 CAPILLARY COLUMN
 Last Update : Thu Feb 22 09:45:06 1996
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) pentafluorobenzene	6.40	168	152533	50.00	ug/l	-0.05
31) 1,4-difluorobenzene	8.20	114	214900	50.00	UG/L	-0.05
52) chlorobenzene-d5	14.35	54	54491	50.00	UG/L	-0.06
62) 1,4-dichlorobenzene-d4	19.83	152	90076	50.00	UG/L	-0.05

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
27) dibromofluoromethane	6.49	111	72918	53.88	ug/l	107.76%
40) toluene-d8	11.10	98	228078	50.37	UG/L	100.74%
55) 4-bromofluorobenzene	17.09	174	67968	52.23	UG/L	104.46%

Target Compounds	R.T.	QIon	Qvalue
2) vinyl chloride	0.00	62	Not Detected
3) dichlorodifluoromethane	0.00	85	Not Detected
4) chloromethane	0.00	50	Not Detected
5) 1,1-dichloroethene	0.00	96	Not Detected
6) bromomethane	0.00	94	Not Detected
7) chloroethane	0.00	64	Not Detected
8) trichlorofluoromethane	0.00	101	Not Detected
9) Pentane	0.00	43	Not Detected
10) acrolein	0.00	56	Not Detected
11) acetone	0.00	43	Not Detected
12) 2-Methyl Pentane	0.00	43	Not Detected
13) carbon disulfide	0.00	76	Not Detected
14) trans-1,2-dichloroethene	0.00	96	Not Detected
15) methylene chloride	0.00	84	Not Detected
16) acrylonitrile	0.00	53	Not Detected
17) mtbe	0.00	73	Not Detected
18) cis-1,2-dichloroethene	0.00	96	Not Detected
19) 1,1-dichloroethane	0.00	63	Not Detected
20) mek	0.00	72	Not Detected
21) 1,1-dichloropropene	0.00	110	Not Detected
22) 2,2-dichloropropane	0.00	77	Not Detected
23) 1,2-dichloroethane	0.00	62	Not Detected
24) bromochloromethane	0.00	128	Not Detected
25) chloroform	0.00	83	Not Detected
26) 1,1,1-trichloroethane	0.00	97	Not Detected
28) 2,2,4-Trimethyl Pentane	0.00	57	Not Detected
29) carbon tetrachloride	0.00	119	Not Detected
30) benzene	0.00	78	Not Detected
32) trichloroethene	0.00	95	Not Detected
33) 1,2-dichloropropane	0.00	63	Not Detected
34) dibromomethane	0.00	93	Not Detected
35) bromodichloromethane	0.00	83	Not Detected
36) 2-chloroethyl vinyl ether	0.00	63	Not Detected
37) cis-1,3-dichloropropene	0.00	75	Not Detected
38) 4-methyl-2-pentanone	0.00	43	Not Detected
39) 1,3-dichloropropane	0.00	76	Not Detected
41) toluene	0.00	92	Not Detected

42)	trans-1,3-dichloropropene	0.00	75	Not Detected
43)	1,1,2-trichloroethane	0.00	83	Not Detected
44)	tetrachloroethene	0.00	166	Not Detected
45)	2-hexanone	0.00	43	Not Detected
46)	1,1,1,2-tetrachloroethane	0.00	131	Not Detected
47)	dibromochloromethane	0.00	129	Not Detected
48)	1,2-dibromoethane	0.00	107	Not Detected
49)	Nonane	0.00	43	Not Detected
50)	m+p-xylenes	0.00	106	Not Detected
51)	chlorobenzene	0.00	112	Not Detected
53)	o-xylene	0.00	106	Not Detected
54)	ethylbenzene	0.00	91	Not Detected
56)	1,1,2,2-tetrachloroethane	0.00	83	Not Detected
57)	1,2,3-trichloropropane	0.00	110	Not Detected
58)	styrene	0.00	104	Not Detected
59)	bromoform	0.00	173	Not Detected
60)	1,3,5-trimethylbenzene	0.00	105	Not Detected
61)	bromobenzene	0.00	156	Not Detected
63)	1,2-dichlorobenzene	0.00	146	Not Detected
64)	n-propylbenzene	0.00	91	Not Detected
65)	2-chlorotoluene	0.00	91	Not Detected
66)	4-chlorotoluene	0.00	91	Not Detected
67)	tert-butylbenzene	0.00	119	Not Detected
68)	isopropylbenzene	0.00	105	Not Detected
69)	1,2,4-trimethylbenzene	0.00	105	Not Detected
70)	1,2-dibromo-3-chloropropan	0.00	157	Not Detected
71)	sec-butylbenzene	0.00	105	Not Detected
72)	1,3-dichlorobenzene	0.00	146	Not Detected
73)	4-isopropyltoluene	0.00	119	Not Detected
74)	1,4-dichlorobenzene	0.00	146	Not Detected
75)	n-butylbenzene	0.00	91	Not Detected
76)	naphthalene	0.00	128	Not Detected
77)	1,2,4-trichlorobenzene	0.00	180	Not Detected
78)	hexachlorobutadiene	0.00	225	Not Detected
79)	1,2,3-trichlorobenzene	0.00	180	Not Detected
